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ABSTRACT

This is a resource book prepared as a single source of practical material to help classroom teachers develop effective approaches to alcohol education. It attempts to present the kinds of approaches that are most likely to lead to responsible behavior in relation to these beverages. The material is not presented as a "canned curriculum" or a unit to be taught; rather, the purpose is to present, in an objective manner, up-to-date facts, attitudes, and behavior patterns relating to alcoholic beverages. The book contains such sections as the historical perspective of drinking, the principles of alcohol education, the teacher's role in alcohol education, and the ranges of behavior involving alcohol. It also includes a bibliography of teaching media and sources.
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LEARNING ABOUT ALCOHOL

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A RESOURCE BOOK FOR TEACHERS

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Samuel A. Miles
EDITOR

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The need to choose is, perhaps, the most constant aspect of conscious human life; it constitutes both its greatest asset and its heaviest burden.

René Dubos, *The Torch of Life: Continuity in Living Experience.*
A Trident Press Book, New York, 1962.

René Dubos is Professor Emeritus,
Department of Environmental Bio-Medicine,
The Rockefeller University, New York

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Foreword

WE have prepared this resource book in response to busy classroom teachers, like yourself, who have requested a single source of practical material to help them develop effective approaches to alcohol education. As a group of people interested in alcohol education, we have tried to help you in actual teaching situations. You may have had little or no experience in alcohol education. You may be experienced in principles and methods of health education and want to check your knowledge against the current concepts. You may be very involved and very interested in the field and hope to make alcohol education a lifetime specialty and want clues for continuing study and research.

We do not believe it is possible, or desirable, to develop or impose on our diverse society one "national" attitude toward alcoholic beverages. What we hope to do is present the kinds of approaches that we believe are more likely to lead to responsible behavior in relation to these beverages. We hope you will choose to become acquainted with them. You may then use those that are comfortable for you, and meaningful for your students and for your community, as a basis for developing your own plans for teaching about alcohol.

This resource book does not attempt to replace you as a teacher or to serve as a substitute for your own thinking. It is not a "canned" curriculum, a "package" or a "unit" to be taught. It does not supplant your own state and local guides on alcohol

education, but gives you ideas for complementing them. it does not attempt to summarize the tremendous amounts of available materials that are of interest to researchers and scholars but which have no practical classroom applications. The purpose is to give you, as objectively as possible, the up-to-date facts, attitudes, and behavior patterns relating to beverage alcohol, as well as some ideas and suggestions relating to alcohol education that will enable you to function more effectively and comfortably in the classroom. Furthest from our minds was any attempt to imply that we are getting young people ready to drink—or not to drink. We hope that with your help students will learn to make informed choices about alcoholic beverages, rather than choices based on misleading or erroneous conceptions.

The last decade has seen an increasing professional and popular interest in the field of alcohol education. A great many resources are available. Some can make positive contributions to effective programs of alcohol education; others are of doubtful value for youths of the 1970's. We have undertaken this task because we believe a synthesis in a form useful to classroom teachers is in order. This synthesis reflects the view that the values-oriented, decision-making approach, in relation to the realities that exist in today's classrooms, offers a more effective basis for a program of alcohol education than the rigid, authoritarian patterns of the past.

It is our hope that learning about alcohol will prove to be a rich and rewarding experience for you and for your students.

Winifred Austin
Bernard Barber
Charles R. Carroll
William L. Eck
Bonnie McNurlen
Jack H. Mendelson
Einar A. Olsen
Edward S. Sands
John S. Sinacore
Alfred A. Smith
Frances Todd

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Samuel A. Miles, Vice President, and Educational Counselor in the Youth and Education Department of Hill and Knowlton, Inc., New York, coordinated the points of view expressed and assumed the responsibility for preparing the manuscript, with the encouragement and support of Dr. Paul A. Wagner, Senior Vice President of Hill and Knowlton and Director, Youth and Education Department. The members of the Department, all of whom have had extensive teaching experience, serve as consultants to schools, universities, and business organizations on youth and educational affairs.

Isabel Ramos, of the Youth and Education Department staff,

Bonnie McNurlen, Classroom teacher
Perkins Elementary School
Des Moines, Iowa 50311

Jack H. Mendelson, M.D., Professor of Psychiatry
Harvard Medical School
Boston, Massachusetts 02118
Director, Alcohol and Drug Abuse Research Center
The McLean Hospital, A Division of the Massachusetts General Hospital
Belmont, Massachusetts 02178

Einar A. Olsen, Ed.D., President
University of Maine at Farmington
Farmington, Maine 04938

Edward S. Sands, Special Assistant to Director
Division of Prevention
National Institute on Alcohol Abuse and Alcoholism
Rockville, Maryland 20852

John S. Sinacore, Ed.D., Director
Division of Drugs, Health Education and Services
The State Education Department
Albany, New York 12224

Alfred A. Smith, M.D., Associate Professor
New York Medical College
Flower and Fifth Avenue Hospitals
New York, New York 10029

Frances Todd, Ed.D., Health Education Consultant
Walnut Creek, California 94595
Formerly Supervisor, Health and Family Life Education
San Francisco Unified School District

LEARNING ABOUT ALCOHOL

Introduction

THIS resource book is supposed to concern itself with learning about alcohol. Actually it concerns itself with human beings—with people who choose not to use alcohol and with people who use alcohol in many different ways. There is a world of difference between a person who drinks responsibly and one who drinks in a manner that causes problems to himself, to his family, and to society.

The knowledgeable wine lover who fancies himself an oenologist has a drinking pattern quite different from the person who has a drink at a bar each day after work. And the fellow who gets roaring drunk several times a year is quite different from an "alcoholic."

The twelve-year-old student who has an occasional sip of wine at home out of curiosity, as part of a religious ceremony, or as an integral part of a meal, under parental control, is drinking in quite a different manner than the one who frequently drinks away from home, with his peers.

There are many differences between the "social" drinker who does not drive for several hours after he has been drinking and the one who drives with enough alcohol in him to endanger himself and others. There are also many differences between social drinkers, problem drinkers and the one specific group of problem drinkers generally referred to as "alcoholics."

Nor can we put drinkers—and abstainers—into any category permanently. There are no absolute patterns of drinking and nondrinking, for most people. A minority of Americans, who have made a decision not to drink and who stick to that deci-

sion, represents the absolute abstainer. Most Americans, however, have patterns of drinking which are neither fixed nor absolute, but which may shift from one category to another. In one study, for example, even among the abstinent group, one third reported that they once used to drink. Fifteen percent of the sample had moved out of or into the heavy drinking group in a three-year period. Such a turnover suggests that heavy drinking does not necessarily or invariably lead to alcohol abuse or alcoholism.

So a whole range of drinking and nondrinking modes exists among people in the real world. The teacher must develop a broad background of understanding and objectivity about the subject. He must be aware that he is helping to prepare students to make their own decisions to drink responsibly, or not at all. He must make it clear he is not attempting to impose upon them his own personal attitudes and choices regarding alcohol. If he hopes to reach his students, he will have to help them to understand the full range of realities that confronts them, so that they can make choices that are both personally responsible and socially acceptable.

We therefore believe that an effective program of alcohol education must begin with an understanding of today's realities about people and alcohol. It must also recognize the realities of the past. Alcohol has a history that goes back thousands of years and a historical perspective concerning cultural, religious, ethnic, and family practices can help avoid mistakes of the past and provide insights into the present. Since alcohol will no doubt continue to be available, possible future trends should be noted.

In doing so, we have to recognize that almost all statements about alcohol, whether they are statements of facts or attitudes or behavior patterns, are generalizations that apply to groups of people and do not necessarily fit a particular class or any individual in it. Students may learn that members of a certain ethnic group have a relatively low rate of heavy drinkers among them. Frank, a member of that ethnic group, may be thinking about his father, who is a very heavy drinker. Will he follow in

his father's footsteps, or the "pattern" of his ethnic group? Or Nina may be wondering about the one drink she had last night that made her vomit, although everybody else seemed to be having a good time. Maybe Nina remembered the class discussion about one drink not hurting anyone. Nina wonders, "Am I abnormal?" Or John may never have had a drink in his life. Is this discussion about alcohol going to make him feel uncomfortable? Will curiosity perhaps lead him to experiment?

The source of any fact about alcohol has to be carefully considered. At best, facts tell us something the experts believe, as obtained by research and confirmed by further research or practical experience. This resource book includes a consensus of facts, ideas, suggestions, and opinions that reflects today's realities in the field of alcohol education. The materials have been gathered from research and from experience in the classroom and in the world outside of the classroom. Not every one will agree with all of them, but they will at least provide the teacher with a starting background of information to which he can keep adding in accordance with his own interests and those of his students.

Many of the facts are stated as numbers, often in the form of percentages, based upon samplings of large groups in various parts of the country. It is easy to get bogged down in all kinds of statistics. We have tried to keep them to a minimum.

Facts in themselves are necessary to provide a comfortable feeling that we know something about a topic. Facts are one of the elements involved in decision making. Decision making, however, also involves attitudes and behavior—how people feel and how they act. Education has been defined as a means of providing rational alternatives for decision making. In an ideal world, reason might rule. In reality, decision making in most areas involves both rational and irrational factors; neither aspect can be ignored. The task of the teacher is to help students develop alternative strategies and goals that are personally satisfying and socially acceptable, without ignoring any of the realities involved, and taking into consideration that people have differing concepts as to what constitutes reality.

PART I

THE REALITIES ABOUT PEOPLE AND ALCOHOL

Some Facts About People and Alcohol in the Real World

The Realities of the Present

IN examining existing teaching materials on alcohol education we have found that they generally begin with a list of objectives and outcomes. They then develop suggested approaches for obtaining these objectives.

We would like to begin a little differently. We would like to confront the teacher with realities about alcohol, people, and particularly young people of school age. Many teachers may be familiar with them. Some teachers may find them shocking or hard to believe. But we know that these are the realities of today as obtained from most current and accurate sources of information that we have studied. (See Appendix III). The objectives of alcohol education will become more meaningful if these realities are first understood.

AMERICANS WHO DRINK

A majority of all Americans drink. Before we use any numbers to back up this broad and sweeping statement, we urge the

teacher to be very cautious in using them in the classroom. Unless they are properly interpreted, they may distort reality and give students misleading impressions.

Accurate figures are hard to find. The number of Americans who use alcoholic beverages has been stated as eighty million, ninety million, and ninety-five million in different publications. As a convenient round number, it is fairly accurate to say that close to 100 million Americans drink alcoholic beverages at least occasionally.

About one out of every seven dollars that Americans spend on food substances and beverages is spent on beer, wine, and distilled liquors.

YOUTHS WHO DRINK

There is a lot of drinking going on among young people. If the teacher has not already come to this conclusion, from his own observations or studies, students themselves, if queried, may affirm this fact, in most areas of the country.

For a long time there had not been enough research done on the subject because, until recently, drinking among youths was not thought to result in major problems. Many studies were conducted in the 1950's and 1960's, but we are uncertain whether the popularity of teenage drinking did actually fall off a little during the late 1960's. In the 1970's alcohol seems to be retaining its traditional position as the most widely used mood-modifying substance.

There is one aspect of drinking that may make it more dangerous than it was in the past—the increasing use of other substances, particularly barbiturates, along with alcohol. Multiple use enhances or potentiates the effects achieved, confusing the effects of alcohol with the effects produced by other substances. This practice is not limited to young people, and it may well be that parental practices are imitated by their children.

The available statistics seem to show that practically every seventeen- or eighteen-year old will have experimented with at least one drink. As many as 50 to 85 percent of high school students, depending on the area, drink at least occasionally. The average age at which youths begin to experiment is thirteen to fourteen years, although some youngsters may begin to experience alcoholic beverages at an earlier age. These realities are in conflict with a statement that the teacher will often find in the literature of alcohol education—that it is up to each person to decide for himself, at legal age, whether or not he will choose to drink. Early drinking is likely to be beer and wine at home with parents.

Does that mean that most youths are violating the law when they drink? Not necessarily. All fifty states set a legal minimum age limit on the purchase, sale, and possession of alcoholic beverages. The teacher will have to check the specific laws in his state, but in most states tasting or drinking alcohol in the home by minors is not against the law. The restrictions apply generally to *public* sale, possession, and use. Whether youths taste or even use alcoholic beverages fairly regularly within the home is a decision for which parents are responsible.

In the majority of the states the legal drinking age is twenty-one, although there is a growing trend toward lowering the drinking age to twenty, nineteen, or eighteen years of age. The ratification of the Twenty-sixth Amendment to the Constitution (June 1971) giving eighteen-year-olds the right to vote initiated a movement toward granting all the privileges of adulthood to these young people. By 1972, twenty-nine state legislatures had passed eighteen-year-old "age of majority" legislation, giving eighteen-year-olds rights, privileges, and responsibilities of adulthood in addition to voting privileges (such as the right to marry, enter into contracts, and borrow money without parental consent). More than fifteen states have included the right to purchase liquor under these laws.

Legal adulthood at the age of eighteen may be a mixed blessing. Some young people are running into unexpected problems, caused by their lack of experience. For example, although they

can legally borrow money or enter into installment contracts, their inexperience may lead to difficulties. Whether the anxieties may perhaps tempt them to use alcohol as one means of relieving the resulting tensions is a hypothesis that has not been verified to date.

DRINKING—WITH AND WITHOUT PROBLEMS

Most Americans who drink do not develop problems that can be directly attributed to their drinking. Nor is there any evidence that drinking in moderation causes any damage to the body or to the mind. Most people display a moderate interest in alcohol, neither disregarding it entirely nor using it in such a manner that it becomes the consuming interest in their lives.

However, there are a number of drinkers who develop problems associated with their drinking. These problems affect not only themselves, but also their families, friends, and society as a whole.

Here again, accurate figures are difficult to obtain because the problems range from mild to very serious ones. Also, people who have problems often do not realize it or are reluctant to admit the existence of their problems. So it is no wonder that estimates about the number of problem drinkers and alcoholics (refer to Part III for definitions) vary from 6 million to 9 million. As a round figure, it can be stated that less than 10 percent of those who drink have problems of some kind that are associated with their drinking, with estimates ranging from 6 percent (6 million out of 100 million) to 9 percent (9 million out of 100 million).

Percentage-wise, 6 or even 9 or 10 percent may seem small. Students may turn the figures around to mean that the odds are ten to one against having any alcohol problem and that those are

pretty good odds—so why worry. Although the percentages may seem small, the total number of individuals involved is quite large. There is no agreement as to just how many lives are disrupted by people with alcohol problems. Most studies agree that the lives of tens of millions of people are involved with people who have alcohol problems.

There is also no simple formula to calculate the cost to society of the loss of a once productive individual. Recent estimates suggest that $10 billion may be spent each year as a function of lost work time in every sector of the economy. The cost in human suffering is immense.

We do not yet know enough about what causes problem drinking to say with any degree of certainty that any student—no matter how far-fetched it may seem to him—may not possibly reach the point of becoming a problem drinker. Thus the decision-making process in relation to alcohol is an extremely important one for each person to carefully consider.

DRINKING AND DRIVING

Although the relationship between driving and drinking is complex, it has been estimated that alcohol abuse or irresponsible use of alcohol is involved in one-third to one-half, of the fatal auto accidents in this country. Many victims are innocent persons rather than the drunk drivers. In 1971, for example, there were 55,000 auto fatalities and during the 1970's the figure will probably pass 60,000, meaning that some 20,000 to 30,000 traffic-related deaths will involve alcohol. Thus, unless the trend is reversed, during the decade of the seventies, when today's youths will be achieving young manhood and womanhood, some 200,000 to 300,000 people will be involved in fatal accidents in which alcohol will be one of the factors. Young people are hit hardest because among youths between the ages of sixteen and

twenty-four, alcohol-related traffic fatalities are estimated to be even greater. Among these young people, the proportion rises to perhaps six out of ten highway deaths linked to alcohol.

Alcoholics and other problem drinkers, who constitute a small minority of the general population, account for a very large part of the overall problem. On the basis of considerable scientific evidence, light drinking, although shown to have adverse effects, is clearly not the source of most of the problem, but its exact role is at present unknown because of insufficient research.

The Historical Perspective

UNDERSTANDING THE PAST

THE fact that the use of alcohol has been widespread in almost all cultures for thousands of years does not constitute a judgment that its use is good or bad. For whatever reasons, the custom has persisted and we believe it is important to understand something about the long historical and cultural interplay between man and alcohol. The relationship between man and alcohol is still characterized today by many misconceptions. The lack of accurate knowledge creates serious obstacles to an understanding of the many facets of the contemporary use and abuse of alcohol.

An historical perspective will help to distinguish more clearly between the direct effects of alcohol on the body and mind and the effects of personal, social, and legal attitudes. The human body (including the brain and central nervous system) has been pretty much the same through the ages, as have the physiological effects of alcohol on the body and mind. Although there are ways of drinking which will minimize the risks involved, by and large little can be done to change the direct effects of alcohol once it gets into the body. Nature has to take its course.

On the other hand, *attitudes* toward alcohol and the way peopel behave in regard to it, legally and socially, change continu-

ously. Only by making this distinction can responsible attitudes regarding the use or nonuse of alcohol be developed. Young people will need to understand the distinction in order to decide how to change those factors relating to alcohol that can or should be changed.

Understanding the historical setting will help them to see that we have indeed learned something from history—that we are no longer relying on approaches such as prohibition that have not worked in the past. The era of prohibition has been emphasized as the failure of legislation to solve the problem of alcohol abuse. On a more positive note, the fact that the prohibition amendment was quickly repealed indicates that laws which do not reflect the wishes of the people can be changed by established legal procedures.

The historical perspective will help students to avoid common misconceptions about people and alcohol. As an example, consider how a knowledge of history will help to obtain a broader viewpoint about the concept of the "skid-row alcoholic," the popular image of the pathetic drunk and outcast who lives in a squalid environment with other alcoholics. As a negative scare technique, the citing of the skid-row alcoholic as an example of what might happen to the student, if he abuses alcohol, is of questionable value in alcohol education. However, as an example of the use of historical and sociological perspective in analyzing a behavior problem, the example has merit.

Skid-row alcoholism is a phenomenon unique to the United States. It had its origins at about the time of the Civil War (1861–1865), when thousands of people were displaced from their homes. Unable to adapt to new environments and to find jobs, they became homeless and destitute. The term skid-row itself is a corruption of Skid Road, a road in Seattle where logs from lumbering operations were slid on skids to the sawmills. The lumberjacks lived in primitive, squalid conditions nearby, often drinking heavily.

After the Civil War, the expanding country required large concentrations of mobile unskilled labor for such jobs as lumbering, railroad building, harvesting of crops. Many of these

people segregated in skid-row areas. These areas grew and declined with changing economic conditions. They shrank during World War I, increased again during the depression, and contracted during World War II. Today the areas are again shrinking because urban renewal is causing the decline of inexpensive housing and restaurants.

Originally populated by younger people, the areas today include many older people who suffer from a wide variety of physical ailments and who lack the social strengths and opportunities to enjoy a more productive life. Thus the skid-row alcoholic cannot be considered merely as an individual problem, but must be related to the total environmental context in which he finds himself. Society, as well as the individual, must accept responsibility for his condition and his treatment.

ALCOHOL AROUND THE WORLD

No one knows when man first began to use alcohol, but one thing is certain—alcohol existed on earth long before there were people around to decide whether to use it, or what uses it had, if any. In nature, the making of alcohol is a fairly simple and widespread process. All it takes is sugar, water, and a microscopic, one-celled plant called yeast. There is sugar (or starch which can easily change to sugar) in all kinds of plants such as grapes, apples, potatoes, rice, corn, barley, rye, and sugar cane. There is also sugar in animal products such as honey and milk. The grape has been widely used as a source of alcohol since ancient times because it has a very high concentration of natural sugar. Given a moderate degree of warmth, and an appropriate acid-base balance, the enzymes produced by the yeast cells "eat" or ferment the sugar and give off alcohol as a waste product. Whoever first discovered that drinking this watery mixture is quite different from drinking plain water will forever remain a mystery.

We know from historical references that wine was first made by man some six or seven thousand years ago. It is also known that no one group has had a monopoly on alcohol. With some exceptions all members of the human race have had alcohol experiences. The exceptions (before they were "discovered") were the Eskimos, the Australian aborigines, and the primitive peoples at the southern tip of South America—the region of Tierra del Fuego. The harsh environments in which these people reside are not conducive to the growth of sugar-containing plants.

There is a widespread misconception that alcohol was unknown in the New World before the coming of the Europeans. The fact is that it was commonly used throughout Central America, the Caribbean, Mexico, and through what are now regions of southwestern United States. It is true that alcohol was not widely used in most of North America, although some tribes were familiar with the fermented products of sugar maple sap and a few other plants.

In the past, alcohol has had many more uses and was used for a greater variety of reasons than it is used today. People learned that wine, for example, was a safer thirst-quencher than water, although they were largely unaware of the relationship between poor sanitation and water-borne diseases. In Western Europe, prior to the era of exploration which began in 1492 with the voyages of Columbus, coffee, tea, and tobacco were unknown, and little or no opium or marijuana was used. Nor was there available the variety of tranquilizers, pain relievers, sedatives, and anesthetics we have today. Alcohol was the substance used for all the many reasons we use these substances today. Before the introduction of modern anesthesia in the nineteenth century, alcohol was used during surgical procedures to alleviate pain. However, since the amount of alcohol required to produce unconsciousness is close to a lethal dose for normal drinkers, alcohol is impractical as an anesthetic agent.

There is no specific current medical use for beverage alcohol. Some physicians, at their discretion, may prescribe small amounts of alcohol as a palliative for certain conditions, but no

person should regard or use alcohol as a medicine without consulting a physician.

ALCOHOL IN OUR COUNTRY

In Colonial America acceptance of beverages containing alcohol (beer, wine, hard cider, rum) was widespread. The Puritans, contrary to some popular misconceptions, did not practice abstinence. They set sail for Massachusetts with 14 tons of water, 42 tons of beer, and 10,000 gallons of wine. Beer and wine constituted two of their early imports from the mother country and before long they were making their own.

The attitudes of the earliest settlers toward alcoholic beverages were not unlike those of today—ambivalent. They were not anti-alcohol, but excessive drinking was socially unacceptable and punishable. Drinking per se was not frowned upon —it helped to soften the hardships of frontier life and had medical values, they believed. On the other hand, as early as 1629, the Virginia Colonial Assembly stated that "ministers shall not give themselves to excess in drinkage, or riott, or spending their tyme idellye day or night." Laws in other colonies similarly sought to control excessive consumption. It did not take too long, however, for colonial ingenuity to discover that liquor laws could be put to better use—they could be used as a source of revenue. By the turn of the eighteenth century, regulation became involved with fines, excise taxes, and license fees. Then came New England's most profitable source of revenue—rum.

Rum was produced by the fermentation of molasses, the thick brown sugary syrup obtained from the sugar cane which grew in the West Indies. Cutting the sugar cane required a great deal of inexpensive labor. What better source than slaves? African slaves in the West Indies produced molasses which, in the form of rum, was the foundation of many a New England

fortune and a dominant factor in colonial industry. At first the rum was produced in the West Indies, but when the colonists realized that dependence on a foreign source was not good business they began to produce it themselves.

Mother England was not about to give up its share of the business. It imposed customs duties on the importation of molasses. Increasing customs duties irked the colonists more than the duty on tea, and was one of the factors that led to the American Revolution.

Nor did the colonists confine themselves to the manufacture and distribution of rum. They did quite a bit of drinking themselves—at all levels of society. The use of beer and rum reflected existing cultural practices and these beverages were part of almost every social gathering—christenings, weddings, funerals, political meetings. Beer was part of the daily diet at Harvard College.

After the Revolution the demand for more abundant and less expensive sources of alcohol led to the discovery of other ways of producing it. Why not make it from local products? And this is what many farmers did; they distilled it for their own consumption and for sale. Whisky making became a by-product of farming. So widespread was the practice that whisky became the medium of exchange, the "hard" currency of the time.

The new government of the United States regarded liquor as a source of revenue. In 1791, a tax on distilled liquor was imposed by the fledgling Federal government, with the double aim of obtaining revenue and of exercising control over the use of alcohol. Some farmers moved west into Ohio and Kentucky to avoid the tax; others in western Pennsylvania decided to fight it out. It required a large army to quell this "Whisky Rebellion" and to establish the right of the government to tax alcoholic beverages—a practice which has continued without interruption to this very day. This episode might be considered for discussion in social studies classes.

The century that followed, the nineteenth, was characterized by the expansion of the United States from coast to coast. Frontier life was hard and dangerous. The wilderness was un-

charted and uncivilized. Alcohol, easily made, readily available and inexpensive, was sought for its immediate effects. There was no time or desire for social drinking in a relaxed atmosphere as we know it today. In short, alcohol was to a large extent regarded more as a palliative than as a social lubricant. Moderation was still the rule, not the exception, and excessive drinking, reflecting the attitudes of the times, was not only socially disapproved, but punishable by law— through fines and imprisonment.

The word "temperance" originally meant moderation. The temperance movement of the 1830's recommended abstinence only from distilled spirits. Many early nineteenth century religious and civic leaders felt that a distinction should be made between the drinking of the stronger distilled spirits, such as rum and whisky, and those with lesser alcoholic contents, such as wine and beer. They also advocated methods of moral persuasion for achieving widespread temperance. By the middle of the nineteenth century, temperance groups began to move toward recommending the total nonuse of alcohol— toward abstinence. Leaders of these groups included the Women's Christian Temperance Union, the Anti-Saloon League and some church groups. The prohibitionistic point of view was not unopposed. Some felt that abstinence contradicted the Bible which approves the use of wine—and wine was used in religious services. The Lord certainly would not have sanctioned the use of any substance that abused the body or mind. Furthermore, those who did not support the abstinence position emphasized that alcoholic beverages are products of nature and therefore good.

PROHIBITION, 1920–1933

By the beginning of the twentieth century the prohibition groups began to campaign for abstinence by legislation. The movement culminated in the passage of the Eighteenth Amend-

ment to the U.S. Constitution on January 16, 1919, to be effective one year later.

1. After one year from the ratification of this article, the manufacture, sale, or transportation of intoxicating liquors within, the importation thereof into, or the exportation thereof from the United States and all territory subject to the jurisdiction thereof for beverage purposes is hereby prohibited.
2. The Congress and the several States shall have concurrent power to enforce this article by appropriate legislation.

The attempt to transform the United States into a dry country by constitutional amendment failed. The amendment did not put an end to alcohol consumption or to alcoholism. Instead, during the fourteen years it was in effect it probably caused more harm than good. It developed a contempt for the power of law. It placed all drinking and drinkers in the same category and stereotyped the alcoholic as a skid-row bum. Furthermore, prohibition emotionalized drinking to such an extent that scientific research and discussion were delayed for several decades. In retrospect, prohibition was another example of the impotence of laws that are not supported by people. It did not change reality—the fact that many people like to drink.

The Eighteenth Amendment was repealed on December 5, 1933, by the Twenty-first Amendment:

1. The eighteenth article of amendment to the Constitution of the United States is hereby repealed.
2. The transportation or importation into any State, Territory, or Possession of the United States for delivery or use therein of intoxicating liquors, in violation of the laws thereof, is hereby prohibited.

The second paragraph meant that although the United States government repealed the prohibition amendment, each state still had the right to have its own prohibition law. Today, every state permits the legal sale of alcoholic beverages, either on a state-wide basis or by giving localities the option to do so. The last state to pass such legislation, Mississippi, in 1966 legalized

the sale of alcoholic beverages only if approved by local option.

How it happened that our society accepted such a drastic and unrealistic solution to the personal and social problems involved in drinking is a complex and fascinating story. The details are beyond the scope of this resource book, but one thing is certain —the prohibition amendment was not repealed on the basis of whether alcohol is good or bad, harmless or hazardous. The decision was made on the very realistic and practical basis that prohibition was not working.

Prohibition did not in reality prohibit the use of alcohol. It resulted, in fact, in the use of alcohol in such a manner that a whole range of new problems manifested themselves, in addition to the problems of alcohol abuse it was supposed to eliminate.

Unable to obtain alcoholic beverages whose quality was controlled by responsible manufacturers, people drank impure liquids sometimes containing methyl alcohol, with resulting blindness and death. Bootlegging, organized crime, and other illegal activities, flourished. Young people, in a spirit of adventure, developed drinking habits that were detrimental to themselves and to society.

During the early days of prohibition, it was argued that more effective law enforcement was needed. Much money and energy were expended to support this point of view, but its failure was eventually recognized, and no attempt to revive again the concept of legal prohibition of alcohol is likely to be attempted.

THE ROLE OF LAW IN SOCIAL AREAS

There has been so much emphasis on the failure of law to solve alcohol and other social-medical problems that the impression may be created that alcohol is the only substance which has had such a difficult history. Whether a substance is legal or illegal changes with time and place; nor is the concept of legality directly associated with whether a substance is "good" or "bad."

The drugs caffeine (as contained in coffee), nicotine (in tobacco), as well as alcohol, are freely available and their use is legal—with some restrictions, such as the sale of tobacco and alcohol to minors. Many attempts have been made to ban the use of these substances by law, but all such legal prohibitions ultimately have failed.

A few brief notes on the history of tobacco and coffee may clarify the constantly changing attitudes toward substances and help to avoid the errors of the past, not only with alcohol, but with other socially sanctioned substances that have potential for abuse.

Preceding the era of exploration of the western hemisphere, Europeans knew only one mood-modifying substance, alcohol. Tobacco became known to Columbus on his very first voyage. The peculiar Indian habit of burning dried tobacco leaves and then "drinking" the smoke amazed him and the early explorers. The Indians were aware of the strange powers of the leaves and the difficulty of giving up the habit. Nor have our experiences told us anything differently. From 1492 until this very day, no culture that has been introduced to tobacco has entirely given up the habit.

Scientific evidence establishing the nicotine content of tobacco as a factor in tobacco dependency did not begin to appear until 1942, but throughout the world, beginning in the seventeenth century, attempts were made to ban it by law. Even the death penalty did not serve as a deterrent. People continued to smoke.

In this country, by 1921, the year after alcohol was prohibited by law, fourteen states had enacted cigarette prohibition laws, but by 1927 the last of the statewide laws was repealed; only laws against sales to minors remain. The trend is to place emphasis on more positive approaches, such as voluntary abstinence, development of alternate ways of smoking, or tobacco substitutes, as more effective methods of dealing with problems associated with tobacco.

During the two centuries following the introduction of tobacco, a number of other products, all of which we now

know contain the chemical caffeine, were introduced. Coffee, tea, the kola nut (used in cola drinks) and cocoa are the most widely known. The introduction of these mood-modifying substances also resulted in attempts at legal repression. Although there is no record of legal prohibition of coffee in the United States, attempts to suppress it have been made in Europe and Asia. At present, in the United States as well as in other parts of the world, some religious groups prohibit their members from using coffee and tea.

Research has revealed that coffee, tea, tobacco, and other substances, as well as alcohol, have potential for abuse. Limitations concerning their use are often advisable for medical or psychological reasons, but experience has indicated that these limitations cannot be achieved by legal measures.

Future Trends

IDEALISM AND REALITY

WHAT lies ahead for the man-alcohol association? Prediction is a difficult and frustrating art. However, it appears that the age-old relationship will continue to be part of man's life and economy. The attitudes and behavior of today's students will influence drinking behavior for generations to come.

Ideally, of course, education would be performing its function most effectively if it helped to raise a generation of young people whose lives would be so rich, meaningful, and challenging that the need for alcohol, or any other mood-modifying chemical, would be nonexistent or minimal. In reality, there is no evidence to indicate that this utopian solution will occur. Thus some comments about the future may provide a broader perspective for a program of alcohol education.

All the available evidence indicates that most Americans will continue to use alcohol. Many of today's teenagers seem to have learned far too little in their homes about its responsible use. While the teacher, in his day-to-day classroom activities, can do little or nothing about parental and adult drinking attitudes, he may influence youths so that fewer of them will have problems associated with alcohol. The emphasis will be on helping people to develop a mature life style in which pleasurable activities (including, for many people, the use of alcohol) can be enjoyed.

From the long-range point of view, the parents and the home

still provide the best place for education for living, including alcohol education. Other educational efforts, including school-community programs, will be encouraged.

APPROACHES TO THE USE OF ALCOHOL

Since people will continue to drink, there will be greater emphasis on encouraging them to assume responsibility for their own drinking behavior. Although the concept of educating youth about responsible drinking practices is certainly not new, we are just beginning to understand how to do it effectively. We know that programs emphasizing only the dangers of drinking have never worked and there is no evidence that they will work in the future. On the other hand, greater stress will be placed on the fact that drinking is not a necessity and that anyone who decides to abstain at any time is making just as responsible a decision as a person who decides to drink.

Responsible drinking depends on a large number of physiological, psychological, and sociological factors which are not yet fully understood. Future research promises to provide information that will lead to modifications not only of irresponsible drinking practices but also to the improvement of mental health of individuals and groups.

Prevention, rather than treatment, will be the basic approach to drinking problems of the future. There will, however, be increased emphasis on exploring every possible approach to helping people with alcohol problems—based on the belief that people who have such problems are sick people who can be treated.

ALCOHOL EDUCATION

Alcohol education in the schools will concern itself with attitudes and behavior involving responsible drinking and nondrink-

ing as opposed to "alcoholism education." The emphasis will continue to be on alcohol education as a part of nutrition and mental health, as an aspect of education involving eating and drinking, rather than on excessive and irresponsible drinking. Alcohol education in public health areas will stress the prevention of alcohol problems, but will also have to concern itself with the reality of helping those who have already abused the use of alcohol.

Medical schools will educate physicians to know more about alcohol and alcoholism in its psychological and sociological aspects, as well as the merely physiological ones. Education will also provide a greater understanding of the subject by teachers, clergymen, public health workers, social workers, psychologists, nurses, lawyers, judges, police officials, and community leaders. Thus alcohol education in the future will involve many more people than at present.

Professional people of all kinds, including scientists and social scientists and those involved in prevention and treatment, should be encouraged to make the study of alcohol a lifetime career in both its theoretical and applied aspects.

In the final analysis, a complete solution of problems relating to alcohol will depend upon the development of a variety of personal life styles comprising a wide range of responsible individual alternatives.

ALCOHOL AND THE LAW

Laws relating to alcohol have had little relationship to actual drinking practices, and these laws are being intensively studied and will eventually be changed to conform to reality. There is growing support that public intoxication should be removed from the criminal justice system, with the exception of misuse of alcohol while driving. As this occurs, the problems of alcohol abuse and alcoholism are being placed in the areas of health,

where more positive approaches may be used to control them.

This does not mean that governmental bodies will divorce themselves from the problems of alcohol. On the contrary, there will be great expenditures of time, energy, and money based largely on the development of comprehensive educational programs whose targets will be the entire population of the United States. These efforts will involve many voluntary and official agencies, using all communications media available. The long-range vision of such programs will be tempered by reality—by the realization that the objectives will be accomplished not in one, but in two or three generations.

At the same time, the treatment of alcohol-dependent people is being encouraged, so that they may lead normal lives as productive members of society. An example of such action is the model legislation drafted by the National Conference of Commissioners on Uniform State Laws at their annual conference in 1971. This model law, the Uniform Alcoholism and Intoxication Treatment Act, is increasingly being adopted by the various states. The objective is to facilitate treatment, rather than to subject alcohol-dependent people to criminal prosecution. The full text of the law is included in Alcohol and Health: First Special Report to the U.S. Congress, National Institute on Alcohol Abuse and Alcoholism. (See Appendix III.)

Concerning the realities of alcohol education, we realize that in the past, alcohol education was too often limited to alcoholism and the dangers of becoming an alcoholic. Today we believe in teaching realistically and truthfully about all aspects of alcohol, with the hope that tomorrow we shall be teaching mostly about more satisfying life styles in which it will be necessary to concern ourselves with alcohol only incidentally.

PART II

THE SCHOOLS AND ALCOHOL

Some Ways Teachers Can Help Students to Think About Alcohol in the Real World

The Role of the Teacher

ALCOHOL education is not a controversial subject. Most educators would agree that students need to learn something about beverage alcohol, whether or not they choose to use it. What *is* controversial are differences of opinion concerning what should be taught and how to teach it.

Many youths of school age, whether they are just entering elementary school or leaving high school, have had some direct or indirect experiences with alcohol, and have already formed some notions, conceptions and misconceptions about alcohol.

Their first relationship with alcohol often comes through the home. Other stimuli are provided by television, movies, advertising, church, friends, neighbors. These outside school influences expose a child to beliefs, attitudes, values, and practices about alcohol which he brings with him to school. Many self-assured students feel that they already "know" more about alcohol than the teacher does—and any direct attack against student beliefs or practices will set up an adversary relationship between the teacher and the student which will defeat any effective learning. Rather, the approach should be in terms of helping each pupil answer one question to his own satisfaction: For everything I do, or would like to do, will my choice to drink or not to drink help me or hinder me?

The teacher should also ask: Is what I am doing helping or hindering my students to make this choice? To either question, there is no single or simple answer. There is no one program that will work best with all schools and for all students because there is no single way of reaching and motivating all pupils in a complex society to behave responsibly in relation to alcohol. The teacher will have to pick and choose to determine which approaches work best, considering the school and community environment and the wide range of individual differences among pupils.

The teacher's role in any curriculum area involving decision making is not an easy one. The decision-making process is not a simple one that can be neatly taught within the confines of a class period, a semester, or a year. Rather, the role of each teacher is to assist students to understand this process. Students may have already made decisions which they may wish to re-examine. On the other hand, there are decisions which students may not be called upon to make until after they have completed their schooling. The decision-making process is covered in Part III.

Principles of Alcohol Education

THERE are a lot of things that a good teacher does almost instinctively, regardless of the field of learning involved. The suggestions that follow are intended to highlight these principles, in relation to one field—alcohol education.

USING POSITIVE APPROACHES

Americans have great faith in education. With only a few dissenting voices we believe that the "more education the merrier" and that more education is the best method of solving any problem, individual or social. Textbooks on alcohol education discuss methods for making alcohol education more effective. They create the impression that if ineffective approaches are used, the most that will happen is that little or no learning will take place.

We firmly believe, however, that ineffective approaches will not only be ineffectual but that they also are capable of doing much harm. Take the scare approach that was so prominent in alcohol education in the past and that still finds its way, indi-

rectly, if not directly, in too many courses today. According to this approach, all the teacher had to do was to teach the "facts" about alcohol. The facts generally meant telling the students about all the terrible and horrible things that alcohol might do to them. The program ended with the moral that if you drink you might become an alcoholic, so the best way to make sure you won't become an alcoholic is not to start drinking in the first place. If you could get students sufficiently scared, they would never want to try alcohol.

This approach hasn't worked because it is unrealistic, as well as psychologically and educationally unsound. It is unrealistic because a majority of young people have already experimented with alcohol. Many found the experience to be pleasant or at least not unpleasant. Those who have not experimented with alcohol may know others who have, and those users do not seem to be suffering from the long list of horrible effects experienced by extreme cases of alcoholism. Furthermore, the young person does not identify himself or his peers with the behavior of the full-fledged alcoholic. Alcoholism is a condition that is generally an illness of older people because it takes years to develop, and it is too remote a possibility for immediate concern to him. It is true that medical clinics have cases of teenagers and pre-teen-agers who drank so much that they became dependent on alcohol in a single year, but these are exceptional cases. The use of such examples is not recommended in the classroom because it is a scare technique. Scare tactics are also psychologically and educationally unsound because they involve uncritical acceptance of statements made by teachers. Today's youths are too sophisticated to believe everything they are told in school, especially if what they learn in school does not coincide with their other experiences and feelings. As emerging adults, they prefer to have a chance to make their own decisions and to participate in the decision-making process.

The immediate result of the use of scare or negativistic approaches in the classroom is behavior such as snickering, knowing glances passed among students, and an attitude of resignation that will defeat any objective that might be achieved by more

positive methods. The positive approach recognizes that the most effective learning takes place when the immediate experiences, interests, and needs of students are used as a point of departure. The teacher should determine where the group is and move on from there. He should find out what students already know, what personal and vicarious experiences they have had with alcohol, what their major interests are. Their interests may differ radically from any preconceived plan that the teacher may have developed, no matter how skillful and logical it may be. Plans should be modified according to student interests; they should not be forced to "learn" what the teacher thinks they must learn. From past experience, they may be looking for a "hidden agenda." The teacher should surprise them pleasantly by enlisting their cooperation in developing a plan of action.

One method that may help to find out the concerns, interests, and problems of the students themselves is a class survey. The information developed in a survey conducted in the Connecticut schools may be helpful as a general guideline. This survey indicated that students as early as grades 4, 5, and 6 express interest in and curiosity about alcohol. In the junior and senior high school attitudes and interests are complex. In grade 12 students ask the school to make no value judgments, but just to lay out the facts (Byler, Ruth V., Editor. *Teach Us What We Want to Know*, 1969. Published for the Connecticut State Board of Education by the Mental Health Materials Center, Inc., 419 Park Avenue South, New York, New York 10016).

On the other hand, the teacher has to be careful not to neglect his responsibilities toward his students. It is neither fair nor realistic to create the impression that alcoholism is a "minor" problem because 90 percent of those who drink do not develop alcohol problems. Because so many people do drink, alcohol problems affect many people. We have also not yet reached the stage in our understanding of alcohol problems to predict with any degree of accuracy which drinker may develop problems associated with his drinking. There are "risk factors," but they cannot be used to determine whether any one individual will abuse alcohol.

It is also neither fair to students, nor realistic, to create the impression that because alcoholism is thought of as an illness today, that it is a temporary condition, like pneumonia, that modern science can cure. There are many types of alcoholism and many successful methods of treatment, but no one method has been found to be a cure-all.

HUMANIZING APPROACHES

We believe that the teacher should consider alcohol education as a field involving human problems, not as a subject like math or French, with a rigid agenda. Students should be permitted full and nonjudgmental uninhibited discussion about alcohol and drinking. The learning situation must involve mutual respect and understanding. Learning should be reciprocal. Teachers can learn much about students and their feelings; students will learn to respect the role of the teacher as a helper in the learning process, rather than as a transmitter of information. Even if students store all the facts in their minds, they will not have learned anything important, unless they use these facts to improve their lives. Learning situations that do not concern themselves with human beings and their values have been referred to as dehumanizing ones. Such activities are impediments to the achievement of all educational objectives, including those of alcohol education.

Dehumanization is a direct attack on a young person's ego—an attack on his self-esteem and self-awareness. Consciously or unconsciously almost all of us have at one time or another dehumanized another person. It is so easy to make a sarcastic remark or to laugh at a student (or have the class laugh at him) when he is groping for a bit of understanding about a perplexing problem.

Youths who question or disobey the conventional attitudes are often made to feel embarrassed, worthless, small, insignifi-

cant, unimportant. They become confused and uncertain about their values as human beings. They develop guilt feelings if they disobey; if they do conform they often feel they are hypocrites who must hide their true feelings and thoughts. If they are made to feel that they are sub-humans and no good, what does it really matter what happens to them—and why should anyone care what they do to themselves? Whose business is it if they want to "kill" themselves, with alcohol or anything else?

Thus one of the most important tasks a teacher can perform if he is to undertake an effective program of alcohol education is to make his students feel like responsible human beings. It is a job that involves schools and teachers, but also parents, peers, and the community. Within the confines of the classroom, a good teacher should make sure that under the very realistic everyday pressures he does not sometimes make his students feel inferior and unwanted. The key to success is the establishment of a friendly classroom climate in which teacher and students express a mutual desire to learn from each other. Teacher and students should respect each other's ideas and be able to discuss things together. Fairness and dignity should be accorded on both sides.

Alcohol education involves a lot of trust. The teacher has to trust his students to take the subject seriously; they have to believe that the teacher will take a realistic approach.

LIMITING OBJECTIVES

Even under the best circumstances, there is a limit to how much an individual teacher can accomplish. Involving other teachers, by integrating alcohol education with other curricular areas, will help to expand objectives for both teacher and students. The study of alcohol is a complex series of subjects with a vast number of interrelated problems. There is an almost unlimited num-

ber of topics that might be used in an alcohol education learning unit. In this resource book, we have tried to recognize this problem by limiting the material to topics which would be of most practical use in actual classroom work, but even with these limited objectives on our part, there are more topics than can realistically be learned under most actual learning situations as they exist today. The teacher's enthusiasm, if not tempered by realism, may carry him into areas that are controversial even among the experts and beyond the comprehension or interests of most students.

Permitting students to participate in the planning phase can help to identify and develop topics that will interest them.

RESPECTING THE IMPORTANCE OF THE HOME

Students come from all kinds of home environments. Although many parents drink, families have many differing beliefs concerning their attitudes and behavior toward the use of alcohol. All researchers agree that the home is the most important determinant of early attitude and behavior patterns. Both students and teachers must be taught to respect the integrity of the home environment, regardless of whether persons in these homes are non-users, responsible users, or abusers of alcohol. Students will become confused and perplexed if any moralistic tag is attached to drinking. If the impression is created that drinking is bad and morally wrong, how does a student feel if his parents whom he loves and respects and who in turn love him, drink, especially when his own observations have led him to conclude that his parents do not seem to be harmed by drinking? On the contrary, they may seem to be in a better mood when they drink. On the other hand, if the impression is given in the home that drinking is desirable, how does the student feel if he observes the behavior of parents who may drink excessively?

After a period of experimentation with other drugs during the 1960's, there seems to be a trend back to alcohol. Parents are often so relieved that their children are not on other drugs that they tacitly or openly condone the use of alcohol as a preferable alternative. This is not a good reason for drinking, but it should be approached very tactfully, so as not to cause any conflict with parental attitudes.

KEEPING AN OPEN MIND

The teacher's responsibility is to help students arrive at intelligent decisions, not to impose conclusions. Whether a student decides to abstain or to use alcoholic beverages is not the sole responsibility of the teacher. The teacher should develop no feeling of guilt or frustration, regardless of the decisions made, if he feels that he has helped to present information as honestly and objectively as possible. If the teacher keeps an open mind, he should be continually alert to new developments and should change learning situations in accordance with new information and the needs of his students.

BECOMING FAMILIAR WITH SCHOOL PHILOSOPHY AND COMMUNITY ATTITUDES

This principle applies to any subject; it is especially important in alcohol education. A great deal of misunderstanding and distrust arises because of a lack of communication among the teacher, school, and community. If the people who are responsible for running the school—principal, superintendent, board of education—know what the teacher is doing, any differences of opinion will be cleared up beforehand. A good way to fore-

stall misunderstanding is for the teacher to clearly spell out the goals he is seeking to achieve. Essentially this means making clear to all concerned that alcohol education does not consist of educating a person to use beverage alcohol. Rather, it means first presenting accurate information about the subject and then assuring each individual that the decisions he makes about drinking are his—and that he must feel comfortable with his decisions.

Naturally, it must be assumed that the teacher will be familiar with community attitudes. One suggested method of quickly gaining such insights is to speak with representatives of local religious groups, with long-time residents, law enforcement officials, physicians, and other influential community members. However, after all insights have been gained, the teacher should remember that a clearly stated and implemented set of goals will be the best assurance of a successful program, since young people will be the first to attest to such an approach as an acceptable one.

PRESENTING OBJECTIVE INFORMATION

Presenting objective information about a subject such as alcohol is difficult. The use of the latest, up-to-date results based on scientific research and clinical observations is bound to be interpreted by some groups as being "for" drinking. The same data may be thought by other people to be evidence "against" drinking. If students are to make responsible decisions, they must be taught to develop criteria for judging the validity of information. Untruths and half-truths will only confuse them and interfere with the decision-making process.

Facts alone, no matter how accurate they are, however, are only a small part of the decision-making process. The facts are used as a basis for understanding, and understanding is necessary for wisdom and judgment.

Objectives of Alcohol Education

THE primary objective of alcohol education is to help students to live realistically and responsibly in a society characterized by a wide diversity of attitudes and behavior patterns related to alcoholic beverages.

DIFFERENTIATING BETWEEN ALCOHOLISM AND ALCOHOL EDUCATION

Alcohol education, to be effective, must be clearly differentiated from alcoholism education. Alcohol education is concerned with the relation of alcohol to the behavior of students in areas they consider important—personal health, driving, sexual matters, success in school, in work, in social situations, and so on; that is, in all aspects of growth and development. Alcohol education should concern itself with what alcohol is, what it can and cannot do, when its use is appropriate or inappropriate (for those who choose to use it). It should concern itself with the complex factors involved in determining why some people drink and others do not.

Learning About Alcohol

Alcohol education should also include learning about why some people drink to such an extent that they abuse the use of alcohol, developing problems associated with its use. Alcohol educators also have the responsibility to help their students to develop patterns of behavior that will help prevent such problems. However, if problems arise, their recognition, treatment and prevention of re-occurrence are generally public health problems, beyond the diagnostic and treatment competence or responsibility of the schools. Public health officials also have the responsibility of helping to develop educational programs, in cooperation with the schools, aimed at prevention of alcohol problems in both young people and adults.

Youth should understand that alcohol is not a necessity of life and that there are more realistic ways of meeting life situations and more appropriate ways of overcoming difficulties than by the use of alcohol. Regardless of one's personal attitude and behavior pattern in relation to alcohol, one comes in contact with other people whose attitudes and behavior may coincide with or differ from one's own. If one is young, attitudes and behavior are still in the process of being defined. Patterns which are based on erroneous information and immature emotional outlooks, often acquired early in life, are difficult to change. Thus the task of alcohol education is to help a young person choose his own immediate path and his future path in adult life, in relation to the optimal handling of real life situations involving alcohol.

WHAT STUDENTS SHOULD LEARN

Students should learn the up-to-date facts about alcohol, its use and effects. The facts about alcohol will "clear the air" and provide a firm foundation upon which to begin building a program of alcohol education. Unfortunately, many educational programs are still designed around subjects and grades. A student may score 100 on a test about alcohol; he may immediately cele-

brate if he so chooses, by going out and having a beer or two or getting drunk. Students concerned primarily with facts have little opportunity to learn what is most important to them—about themselves and their feelings, to accept genuine feelings without a sense of guilt or worthlessness, and to understand why other people do the things they do when they respond emotionally as well as intellectually.

Emotionalism in relation to alcohol should be avoided. Once the atmosphere in the classroom becomes highly charged, learning becomes difficult. Fostering good mental health in relation to an issue which is controversial involves much more than a debate "for or against drinking" or "for and against abstinence." It involves the use of intelligence and reason in trying to cope with a very difficult personal and social issue.

There is a difference between appropriate and inappropriate drinking patterns. The traditional distinction between drinkers and nondrinkers is not a realistic one, but a realistic distinction can be made made between appropriate and inappropriate drinking behavior patterns. Appropriate behavior includes both nondrinking and moderate drinking. Emphasis on nondrinking alone is also not realistic because this focus can provide no guidance for those who will eventually choose to drink. Inappropriate or excessive use of alcohol can lead to problems and one of the best ways of preventing such problems from occurring is to understand the nature of the problem, in all its dimensions—physiological, psychological, and social. The excessive use of alcohol can lead to major health problems, for which various modes of treatment are available.

In summary, effective alcohol education today aims to develop in the student a sense of responsibility for his own welfare and that of others.

Behavior related to alcohol, then, is surrounded by emotional, political, social implications, creating the need for an insight into the dynamics of such a complex human behavioral problem. Every problem in alcohol education should try to answer the question "Why such behavior in relation to alcohol?" The answer should always involve intelligent problem-solving activity

into the causes, effects, and consequences of any type of behavior involving alcohol.

To help students achieve the objectives of alcohol education, the following guidelines should be kept in mind:

- For every act of behavior that is related to alcohol, there are multiple causes which should be discussed and understood.
- An understanding of the immediate and long-range consequences of alternative patterns of behavior will help the student make decisions and develop those behavior patterns that will be of greatest benefit to himself and others.
- Behavior patterns of benefit to the individual will be of benefit to a large segment of the school and community population.

In summary, education whose aim is responsible behavior for responsible living includes alcohol education. A more detailed discussion of behavior in relation to alcohol is developed in Part III, *Ranges of Behavior Involving Alcohol.*

Curriculum Approaches

IN this resource book we have tried to set the tone by providing a framework around which a modern curriculum in alcohol education could be realistically created. At present, of the fifty states some forty have developed state-wide curriculum guides or have guides in various stages of planning and preparation. They differ widely in basic philosophy, content emphasis, and depth of detail.

Various curriculum manuals have also been prepared by agencies of the Federal government. An example is the six-volume series prepared for the National Highway Traffic Administration and the National Institute on Alcohol Abuse and Alcoholism. (See Appendix.)

In addition, individual school districts and teachers, depending on community and personal interests, have developed curriculum guides more suitable to local teaching situations.

Some curriculum guides provide detailed grade by grade objectives and content materials. Others are in terms of levels, as for example, four levels corresponding to grades 1, 2, and 3; 4, 5, and 6; 7, 8, and 9; and grades 10, 11, and 12. Others prefer a division into elementary and secondary school levels.

EMPHASIS ON RESPONSIBLE CHOICES

Regardless of the approach believed to be most useful for a specific school or class, effective curriculum building in alcohol education today emphasizes the importance of the freedom of the individual to make responsible choices. The achievement of responsible behavior means that students must become aware of the many factors that influence their actions, and that learning about alcohol itself is only a minor but important part, of the entire picture. Effective curriculum building in alcohol education must concern itself with a large number of topics which in the past have been treated only superficially, if at all. Among these topics are:

- Developing a favorable self-concept
- Developing respect for self and others
- Taking responsibility for one's own actions
- Expressing emotions constructively
- Becoming aware of the environmental factors that influence one's decisions
- Developing one's own sense of values
- Understanding the meaning of risk and how to make decisions involving some element of risk
- Understanding peer influence and how one can make independent decisions in spite of these influences
- Acquiring effective communication skills so that one can both listen and communicate his knowledge and feelings to others
- Making learning activities more relevant to immediate and future life situations

Any class, in reviewing these topics as a list of criteria for responsible decision making, will have a wealth of material for discussion purposes. Most importantly, however, it will leave no doubt in every student's mind that the responsibility is his.

WHEN AND WHERE SHOULD ALCOHOL EDUCATION BE TAUGHT

Although alcohol education, mostly in the form of temperance education, was a statutory requirement in some states as early as 1858, it was rarely taught as a separate subject, like English, mathematics or history. There is no doubt, however, that many considered it an important topic because most states began to require such programs in the schools, although the "evils of alcohol approach" was often the dominant theme.

Since beverage alcohol is readily available in our society, most educators today accept the need for alcohol education, although no one can unequivocally state that it should be taught as a separate course, as a unit within an existing course or integrated within several courses. Teaching it as a separate subject could result in giving the topic unnecessary emphasis. The already crowded curriculum suggests that its integration with other subjects is to be recommended. As desirable and natural as this may be, it must be remembered, however, that alcohol education is a sensitive topic and some teachers may believe that they cannot or should not personally be responsible for teaching it. There is a need, therefore, for teachers who feel comfortable in this area to make effective contributions.

In the broadest sense alcohol education should begin in the elementary grades and continue at various points throughout the secondary grades. There are appropriate opportunities in health education, science, driver education, social studies, homemaking and literature, to mention the more obvious subject areas. If however, we are to support young people in responsible decision making, this topic should be included in a subject that is essentially dialogue centered, where all aspects can be thoroughly discussed. Today, such a course could be health education, although we must recognize the importance of showing the relationship of beverage alcohol to such topics as safe driving, the role the substance has played in our history, its physiological reactions, and the many examples of the use of alcohol in literature. When

capable teachers are available, many opportunities exist. It is hoped that teachers will emphasize that what we are really trying to do is help young people to make responsible decisions.

It must also be remembered that for most students who choose to drink, drinking is only one of the many experiences available to them and it is not the most pervading influence in their lives.

ALCOHOL EDUCATION WITH EDUCATION ABOUT OTHER SUBSTANCES

Alcohol is a mood-modifying drug and when abused it shares effects similar to those produced by many other mood-modifying drugs. However, the way in which most people use alcohol —in moderate amounts in the context of social drinking—makes the role of this substance different from that of other drugs when used illegally or abused. Alcohol is legal, socially sanctioned, freely available, relatively inexpensive, ritualistically secure, and used for a variety of purposes. (It should be pointed out that many other drugs, when used appropriately, also share these characteristics with alcohol; many drugs are helpful and life-saving.) In reality, learning about alcohol, whether as part of a broader unit on drugs or treated in greater depth as a separate topic, often goes back-to-back with learning about drugs that are illegal or capable of rapidly developing dependency, or both. Regardless of approach, an effort should be made to differentiate between alcohol, when used in moderation, and other mood-modifying substances, when these are used illegally or abused.

It should be made clear, however, that such differentiation does not represent a pro-drinking position. Rather, alcohol education simply concerns itself with a substance that is widely used. Since most young people will be confronted with the need to make a decision about using alcohol, they deserve to understand the role it plays in their society.

On the secondary school level, with the division of instruction

in terms of curriculum areas, such as science, health education, social studies, home economics, and driver education, imaginative teaching units often are developed in which alcohol occupies a minor role in larger units about other drugs. When this is the case, one should be sure that such approaches do not negate the objectives of alcohol education, as far as developing responsible attitudes toward use of alcohol is concerned. Correlation of alcohol education with related areas such as science and social studies should complement direct instruction in health education courses with care taken to insure adequate time allocation for learning about alcohol without giving undue emphasis to the role of alcohol in the lives of young people.

Regardless of the approach used in any school, planning for alcohol education should be carried out as carefully as that in any other curriculum area. If the attitude prevails that alcohol education is somehow the responsibility of every teacher, it may turn out to be no teacher's responsibility.

METHODS OF LEARNING

The specific teaching methods to guide learning in alcohol education are basically the same as those used in any area of the curriculum. A standard reference work in the field, *Teaching About Alcohol* by Frances Todd (McGraw-Hill, Inc., 1964) devotes more than forty pages to this topic. Other references listed in the Appendix also provide valuable material. A detailed review of this material is beyond the objectives of this resource book. We shall include some observations, however, that we believe have not received sufficient emphasis.

DEMONSTRATIONS AND EXPERIMENTS

In alcohol education we have passed the era in which a worm was killed by immersion in a container of alcohol. Such demon-

strations, to "prove" the bad effects of alcohol upon living tissue, are not scientifically accurate and the frightening aspects did not contribute to the objectives of alcohol education.

A more recent approach, based upon the injection of alcohol into living animals, such as rats, often is mentioned in the literature. These techniques are limited to a study of simply physiological reactions to alcohol in animals. In human beings, in addition to the fact that they differ in many ways from animals physiologically, reactions to alcohol are based on psychological and sociological factors as well as on purely physiological ones.

Teachers should also keep in mind the *Guiding Principles for Use of Animals in Elementary and Secondary Schools,* published (1973) by The Humane Society of the United States (1604 K Street, Washington D.C. 20006), which contains the following statements:

> No procedure shall be performed on any warm-blooded animal that might cause it pain, suffering, or discomfort or otherwise interfere with its normal health. Warm-blooded animals include man, other mammals such as gerbils, guinea pigs, mice, rabbits, hamsters and rats. It also includes birds such as hens, quail, pigeons . . .

Teachers may obtain free copies from the Humane Society.

HOMOGENEOUS AND HETEROGENEOUS GROUPS

It is often assumed in alcohol education that student groups composed of students of different ethnic, cultural, and economic backgrounds will provide for more effective learning about alcohol because students will be exposed to different points of view, and will be in a better position to understand and accept behavior toward alcohol which differs from their own. They will therefore obtain a broader perspective.

It should be recognized, however, that some consideration must be given to the fact that the indiscriminate mixing of very different minority groups may result in very highly polarized situations which may make it difficult to achieve consensus in regard to objectives. Different groups may come to class not only with widely differing attitudes about alcohol but with dif-

ferent patterns of communicating. Careful preparation is necessary to make all members of the group understand that these differences do exist and that all points of view are to be respected.

RESOURCE PEOPLE

The use of resource people from the community, such as people who were formerly alcohol-dependent, physicians, and law enforcement officers, has been suggested as a means of bringing into the classroom a diversity of opinion that could not be otherwise obtained.

Such a resource has value if properly used. Advance preparation should include the understanding that the resource person will often be presenting a point of view based on his interest and experience. The physician may emphasize the physiological effects of alcohol and concentrate on his own experiences with abusers of alcohol. The police officer may overemphasize the importance of law enforcement. It is up to the teacher to relate information and beliefs expressed by these resource people to a more objective and balanced point of view.

The use of a person who has found alternative ways of living that enable him to cope with problems that were formerly related to alcohol abuse should be considered very carefully. A common way of referring to such a person is "ex-alcoholic." Because the term carries negative and emotional connotations, it should not be used. Such a person should be referred to by name and described as a person who has had an illness associated with excessive use of alcohol, who has been treated, and whose experience might be of value to the group. Such an individual should be interviewed before being assigned a role on the school program and his relationship to the objective of alcohol education explained very carefully.

The success story of such a person may give the impression that the illnesses called alcoholism can be always arrested or cured by the methods that were successful with that individual. It is also possible for such a person to romanticize his experiences to such an extent that curiosity may induce some individuals to experiment with alcohol.

The informal classroom setting is a better environment than a school assembly. Assemblies may overemphasize the importance of the resource person and create an entertainment or curiosity atmosphere, rather than a learning one. Also there is usually no follow-up opportunity for group discussions to clarify, reject, evaluate, and deal with individual interests.

In any event, resource people should not be used by schools to get them "off the hook" by abrogating their responsibilities for alcohol education to resource people. They should be selected for their ability to supplement and complement, not to substitute for good instruction.

CURRENT EVENTS

The use of current events is a technique that has been used in schools for many years to place the topic being discussed in a contemporary setting and to produce greater interest. However, much of such material consists of isolated bits of information. A firm basis for making mature judgments must include an understanding of all aspects of a subject—including the psychological, sociological, economic, religious and even political aspects. A few examples may illustrate this point.

A newspaper reports that a religious group is calling for the legal prohibition of alcoholic beverages. Here is an opportunity for students to research the attitudes and actions of various religious groups. What are the attitudes of various religious groups toward the use of alcohol? Have these groups changed their attitudes toward alcohol use over the years? In what ways, if any; and why have they changed or not changed? How can students obtain accurate information? Would they suggest library research, interviewing ministers, priests, and rabbis? Prominent lay members? After information has been obtained, students can role play religious leaders being interviewed by reporters on their attitudes and actions regarding alcohol. Or students can write handbooks outlining the attitudes of different religious denominations in regard to alcohol. The project can also include our nation's experience with the Eighteenth Amendment and the attitude of religious groups toward it.

A TV documentary calls for increased alcoholism education for youth. The incorrect use of the term "alcoholism education" as opposed to "alcohol education" is often confusing to youth. As a class project students might be asked to write two TV scripts, one on alcoholism and the second on alcohol education. The alcohol education script would focus on alcohol education as a basis for responsible decision making regarding alcohol. The alcoholism education script would include information and discussion concerning the possible outcomes of the abuse of alcohol, treatment of abusers, and behavior that will prevent such abuse.

An article in a popular periodical prematurely reports ongoing research on alcoholism and makes sensational statements. Youths need guidance on evaluating the accuracy of such reports. The teacher may ask students to consider such questions as: Has the research been conducted on animals, rather than on human beings? What are the qualifications of the scientists? Have other scientists confirmed the findings? What does the scientific report actually say, as opposed to the summary in the popular report? What previous work has been published on the same subject? Can students talk to other researchers and ask their opinion?

THE LIMITATIONS OF SCIENCE

Science and the scientific method have been useful in helping to provide facts which are important in decision making about alcohol. Facts alone are only one of the inputs necessary for decision making. For example, the breath test provides a fairly objective means of determining whether one is legally sober enough to drive. But the decision to drive after drinking depends not only on a knowledge of the facts of legal intoxication, but on complex psychological and sociological factors. The factors are not yet completely subject to analysis by the scientific method, but they are at least as important as the "facts" in assessing alcohol behavior.

Even many of the facts have to be carefully analyzed. There is a tendency to accept any statement made by anyone who is labeled as a scientist as a "scientific fact." Contrary to popular

belief, consensus among scientists is not automatically achieved and battles are constantly raging. Many scientific theories are attractive in their simplicity, but inapplicable to practical problems of behavior. Some statements made by scientists are based on research, others on personal opinion. Conclusions based on research often include subjective interpretations. Students should learn to understand that not every statement made by scientists is necessarily a statement of fact. The practical use of scientific facts in a complex field such as alcohol education involves integration of the facts with the psychological and sociological factors in human behavior.

ADDITIONAL TOPICS FOR ALCOHOL EDUCATION

In recent years students have shown an interest in a wide range of topics, many of which have not been included in references readily available to them. While it is impossible to list or discuss all questions that might arise, calling attention to some might give teachers ideas for additional materials they may wish to include.

COMPOSITON OF ALCOHOLIC BEVERAGES

Many people are under the impression that in general alcoholic beverages contain primarily water and alcohol. Some products, like beer, contain hops; wines, natural fruit substances; some liquors have flavorings of various kinds. Small quantities of naturally occurring nonalcohol substances, called congeners, are also present in most beverages.

In addition, small amounts of other ingredients may be added, as preservatives, or to produce products that look more attractive and have a more pleasant and consistent taste. Beer and many wines, with natural alcoholic concentrations sufficientiy low to permit the growth of bacteria and yeast, may have preservatives added to them. Such preservatives are not needed for

distilled liquors, or for fortified wines, which have high concentrations of alcohol. Some distilled spirits, however, may have additives to improve or provide uniformity of color and flavor.

The quantity of alcohol in an alcoholic beverage may vary. A single drink of distilled spirits may contain an ounce of alcohol. Or a generous host may make a drink with twice that amount of alcohol, or perhaps use higher proof beverages. Commercially, beer was formerly available in twelve-ounce containers; larger and smaller containers are now becoming popular. The amount of alcohol in a glass of beer obviously also varies with the size of the glass. Whether classroom discussion which focuses on these subjects is getting into the area of "teaching students how to drink" is a matter each teacher and school will have to decide.

SAFETY OF ALCOHOLIC BEVERAGES

Manufacturers have a vested interest in producing products uniform in quality and free from toxic ingredients. Modern facilities use scientific and technological methods. If one is to drink, the quality-controlled products of reputable producers are the best guarantee of safety.

The illegal production of alcoholic beverages (to avoid the payment of the high excise taxes) is called "moonshining." Such alcohol may be distilled in vessels containing soluble lead salts, which will attack the nervous system. Other contaminants may also be present because sanitary conditions are not controlled.

"Bootlegging" consists of the illegal transportation of tax-paid alcoholic beverages into areas prohibited by local law. While products of reputable manufacturers may be illegally transported, there is the added temptation to transport moonshine products.

THE ECONOMICS OF THE INDUSTRY

The excise taxes on alcoholic beverages are a lucrative source of revenue for governments and taxes account for a considerable percentage of the retail price. In addition, governments impose

price-cutting restrictions in an attempt to eliminate abuses that might result from unlimited competition in this field. In spite of all taxes and restrictions, alcohol beverages are available at prices that in most cases do not impose economic hardships for most responsible users.

The large industry that produces alcoholic beverages is a very competitive one and all along the line, from manufacturer to consumer, large amounts of money are expended to obtain consumer preferences for one type of product over another, to obtain competitive advantages. In this respect the industry does not differ from other industries. Responsible industry trade associations are active in urging consumers to drink moderately. There are, however, restrictions that are unique to the industry. The industry itself has imposed controls on advertising. Thus distilled liquors are not advertised on radio and television, but beer and wine products are. Among the states and localities there are wide variations in the kinds of advertising that are prohibited.

PART III

RANGES OF BEHAVIOR INVOLVING ALCOHOL

Some Ways Teachers Can Help Students Learn to Make Their Own Decisions in the Real World

The Spectrum of Behavior Patterns

THERE is a continuous spectrum of behavior patterns in relation to alcohol ranging from abstention through occasional experimentation, moderate drinking, and through a whole range of modes of excessive drinking. While the two ends of the spectrum (absolute abstention and chronic excessive drinking) are fairly easy to define, it is difficult for everyone to agree as to what constitutes responsible behavior regarding the use of alcohol. To some absolute abstainers, any drinking whatsoever may constitute irresponsible behavior. A social drinker might consider an abstainer's refusal to drink a toast at a wedding as an example of behavior not appropriate on that occasion.

Nevertheless, we think it is possible to describe responsible behavior, in a nonjudgmental context, in terms that are acceptable to most people. Most people would agree that *responsible behavior is behavior that promotes individual well-being and harmonious relations among people, rather than behavior that pulls them apart.* Most people would agree that both abstention and responsible drinking constitute responsible behavior, but that excessive drinking is associated with irresponsible behavior.

The distinction between responsible and irresponsible behavior can perhaps be better understood by noting what current

research seems to indicate about the paradoxical dual nature of alcohol:

> It is becoming increasingly evident that the effects—metabolic and pharmacological—on the organism are very different at high and low levels of ethanol consumption. When consumed in moderate quantities, alcohol seems to be a relatively innocuous nutrient that can be tolerated without apparent harm to the organism. When consumed in quantities that constantly approach the upper limit of mechanisms responsible for its metabolic elimination, however, it becomes a drug that may produce very serious metabolic derangements.
>
> Frank Lundquist, "The Metabolism of Alcohol," in *Biological Basis of Alcoholism*, edited by Yedy Israel, and Jorge Mardones. Wiley-Interscience, a Division of John Wiley & Sons, Inc., New York, 1971. (Frank Lundquist is in the Department of Biochemistry, University of Copenhagen, Copenhagen, Denmark)

Whether alcohol will act as a "relatively innocuous nutrient" or as a "drug that may produce very serious metabolic derangements" depends upon the manner in which an individual chooses to drink. Thus, the ultimate controlling factor in the decision to abstain from drinking, to drink in moderation, or to drink excessively, rests on the decision-making process of each individual. Most people make wise and responsible decisions in relation to alcohol; others make decisions that cause difficulties to themselves and society.

A child's first contact with alcohol may be in conjunction with family members who use it. At some point in life, usually during his teens, the growing child may personally be faced with a situation in which alcohol is available to him— and he has to make a decision. Should he continue the nonuse of alcohol? Should he begin to try it? If he decides to begin to experiment with alcohol, a whole series of interacting possibilities present themselves—whom to drink with, under what circumstances, what kind of alcoholic beverages, how to react to others who choose not to drink. All such decisions involve beliefs, attitudes, values and ethical concepts and their relation with pleasure, gratification of personal needs, social relationships,

religious beliefs—and intermingle with a person's own self-image and conscience. These complex interrelations may result in satisfying experiences and he may decide to continue to drink. Or he may find the total experience unsatisfactory and decide not to continue to drink. Whenever circumstances arise when alcoholic beverages are made available, he has to continue to make decisions.

The teacher's role is to help the student understand the decision-making process, leaving the final decision up to the individual. (We realize today that when an individual uses alcohol in such excessive amounts that he becomes ill, the decision-making process is beyond his personal ability to control and he will require professional help. In this resource book we are primarily concerned with young people who are capable of making decisions.)

The teacher can best assist by guiding students in their acquisition of accurate, factual information, by helping them become aware of the many factors involved in responsible decision making and by encouraging them to discuss the different points of views and issues expressed. At the same time the teacher must make it perfectly clear that he is not interfering with the individual's freedom of choice or minimizing the influences of family, community and religion.

Risk

A suggested first step in making students aware of the decision-making process is to introduce the concept of risk. Risk is a perfectly natural occurrence in human life. From the moment we are born we are subject to risks of all kinds. We continually run the risk of becoming injured, or ill, or being involved in a fatal accident. For each act of behavior, such as crossing a street, driving a car, drinking water or alcoholic beverages, or smoking, there is an element of risk. The degree of risk may vary with time and situation; some risks are personal, some involve other people.

Driving a car, even under the best of circumstances, involves some risk, but we generally decide that the advantages outweigh the risks. Driving a car immediately after having had three or four drinks involves a still greater risk

The idea of risk might be illustrated in the classroom by suggesting that students develop a chart, requesting them to judge the degree of risk (high risk, moderate risk, or low risk), and asking them to give reasons for their judgments. The following acts of behavior are for illustrative purposes only—each class should choose only those acts that are meaningful to its maturity level and applicable to its environment.

A further analysis might be made by discussing the risks of abstaining from each of the acts of behavior. For example, ab-

ACT OF BEHAVIOR	RISK POTENTIAL (HIGH, MODERATE, LOW)					
	RISK OF ILLNESS OR INJURY	RISK OF BECOMING DEPENDENT	RISK OF LOSING SELF-RESPECT	RISK OF PARENTAL DISAP-PROVAL	RISK OF FRIENDS' DISAP-PROVAL	RISK OF TROUBLE WITH SCHOOL OR POLICE
Drinking water from a faucet						
Drinking water from a stream in the woods						
Drinking coffee or tea						
Drinking cola drinks						
Drinking wine or beer						
Drinking distilled alcohol beverages						
Smoking cigarettes						
Smoking cigars or a pipe						
Smoking marijuana						
Sniffing glue						
Using a drug prescribed by a physician						
Using a friend's prescription drug						
Using aspirin						
Driving a car						
Driving a motorcycle						
Flying in a plane						
Cheating on tests						
Using drugs like heroin						
Playing football						
(and other acts, depending on interest of class)						

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staining from drinking water, abstaining from drinking alcohol, abstaining from using a drug prescribed by a physician.

Then the question might be posed: For those acts of behavior judged by you to offer some risks, why do you take these risks? What gains or rewards are worth the risks involved? The chart might be extended to include gains or rewards in terms of making more friends, getting "good feelings," or seeking thrills or excitement.

As a final step, for those acts of behavior in which the risks outweigh the rewards, what alternate acts of behavior would you consider to be desirable? Would such things as a closer relationship with parents, teachers, or finding someone to love offer better substitutes for riskier acts of behavior?

With such an approach, the teacher should expect that divergent points of view will be expressed and he should encourage students to develop mutual respect for, and sympathetic understanding of, different viewpoints.

Conventional learning experiences, both in and out of school, have developed in students a tendency to want a definite conclusion to be reached, for each problem. The teacher should emphasize that for many life problems there often is no one "right" answer. There are alternatives to be explored. Decisions do not have to be made and accepted within the limitations of a classroom period. The alternatives may have to be considered for long periods of time, integrated with additional experiences, and subject to continual evaluation and possible change as part of the decision-making process.

Values

TO understand *why* people consider some risks worth taking leads teachers and students into more difficult areas. What are the yardsticks—the values—which a person is to use to help him decide what decisions, involving low risk as well as those with varying degrees of high risk, are worth making? Young people generally do not have the experience or the maturity to guide them in their decisions. They do not fully look at the alternatives or consider the consequences. Or even if they are aware of these things, they may decide the risk is worth the gain. The need for peer approval and the feeling that comes from defying parental and legal guides, often gives them a tremendous sense of power.

The way a person feels about himself makes a big difference in the kinds of decisions he makes. If he feels confident about himself as a person, he will be in a better position to assess the risks involved in making responsible decisions—risks that are acceptable to him, and acceptable in relation to his family, his peers, his community. A person with a strong sense of self-concept (self-awareness, self-image, self-esteem), will realistically confront his problems, even if unpleasant, and have goals and purposes which he will work hard to achieve. Such a person will achieve "highs" by meeting and overcoming challenges in a realistic way.

It has often been stated that a person who has a strong or

positive self-image is so confident about the decisions he makes that they cannot be altered by someone else's opinion or by an irrational spur-of-the-moment decision. However, many people, at one time or another, make spontaneous decisions or decisions based on feelings or beliefs not strictly governed by the laws of logic. Such decisions are sometimes life-enriching and add to the zest and joys of life. The teacher should not create the impression that making such decisions on occasion is to lack a positive image.

A person who has a poor self-image, or whose self-image is destroyed by criticism, defeat, and distrust may become inclined to take greater risks for lesser gains. He will exhibit behavior patterns that try to avoid the real difficulties of life, often practice self-deception, develop hatred toward himself and others, resort to meaningless periods of idleness with no purpose in life, and may, as part of this pattern, resort to the use of alcohol and other drugs as a means of "copping out."

We believe that teachers should consider the value framework as a common denominator for helping young people to think out the "what and why" of a decision, for sorting and analyzing reasons for the decision, in order to develop the skill to cope with life's ups and downs. The development of such a skill is important not only in alcohol education, but in the hundreds of decisions in which value dilemmas present themselves.

We are not going to go into a long academic and philosophical discussion about the meaning of values. Values are the things that people hold to be important. They are the things that people want or care about—not necessarily what they say they care about because what people say is not always what they think. Values are the guides that tend to give direction to life. They imply much more than the simple choice between right and wrong, or moral-ethical religious considerations. These ideas are important, but more broadly, people value the things they want or need, such as health (physical and mental well-being), work, leisure, love, friendship, education, money, religion.

Many value judgments about alcohol are based on misin-

formed or biased premises; nevertheless people may act on these premises. A judgment based on the decision to abstain from drinking may rest on the belief than even one drink may have a permanent effect on physical or mental well-being (not a valid premise), or it might be made because of a deeply-felt religious conviction (a valid premise). In alcohol education, emphasis should be on decision making that is based on values that are feasible, logical, relevant and significant both for the individual and for his relations with his fellow man.

Some people value conscious control above all else and would reject anything that would cause them to abandon it—even for a brief moment. Thus, in addition to any other reasons they may have, they would reject the use of any substance, like alcohol, that impairs their individuality, their concept of self-awareness, or self-esteem. Individuality is viewed by many people as a responsibility or an obligation to the individual (self-responsibility), as well as an obligation to others (parents, peers, society as a whole). Other people find that the temporary abandonment of responsibility, the loosening away from conscious control for a brief period of time, is of value or importance to them. Both of these dimensions of responsibility are acceptable to our society.

Although the failure to conform to widely acceptable and commonly understood standards is often judged to constitute irresponsible behavior, not all acts of nonconformity are necessarily irresponsible ones.

Norms

A norm is learned behavior occurring with some kind of regularity and predictability among a majority of people in a given culture or society. To describe a norm we have to specify the kind of people who are behaving in a certain manner, the kind of situation, and the kind of behavior which occurs. Non-drinking or abstinence is a norm because it is socially acceptable and constitutes responsible behavior. Most Americans (kind of people) who drink beverage alcohol (kind of situation) do so in a manner that society regards as personally responsible and socially acceptable (kind of behavior). Excessive drinking is regarded as irresponsible behavior in our society.

These patterns of social behavior generally occur with such regularity that we have an expectancy that they will continue to occur. Not only do most Americans who drink do so in a responsible manner, but they expect others to also act in a similar manner. Since expectancies and regularities of behavior usually go together, one term—social norm—has been used for both. There are different social norms about drinking in different groups of people under different situations. The norms in regard to drinking may vary by ethnic and religious backgrounds, socio-economic status and other factors. But within each group, there are regularities of expectancies and behavior.

These behavior regularities and expectancies are not all social norms. Norms have to do with socially recognized classes of people, not with individuals. In addition there are individual

personality differences. One person may prefer to drink alone; another might only do so in a social situation.

When a reliable pattern of behavior regularity is broken, we may be surprised, but unless the behavior change is drastic, the social norm is not violated. For example, a person who generally limits himself to one drink at a party, may take a second or third drink. Such a change in behavior may cause some surprise and mild reaction, but would not constitute a violation of the social norm. On the other hand, if a social drinker begins to drink continually and excessively, his conduct is considered irresponsible, inappropriate, and socially unacceptable. The behavior would be considered a deviation from the social norm; other people feel that such behavior ought not to occur.

Where do we find these norms as a guide for behavior? Some norms have become formalized and are stated as laws—laws about drinking and driving, about public intoxication, rules about the use of alcohol in public schools. In addition, there are many norms that are informal—not written, but merely implied and accepted by the group. In theory, students below a certain age cannot legally drink in public places; in practice many do. The norm is real, it exists, but it is not in the books.

The rules or norms constitute a group of values that can be learned or followed. If the rules contradict each other too often and too seriously, a conflict develops. For example, a student may feel strongly about obligations to his parents and to his peers. If his parents believe that he should not drink at all and many of his peers accept drinking as a social norm, a conflict develops. All societies contain certain amounts of contradictions like these. Although the teacher of alcohol education must accept responsibility for presenting accurate information and for helping to generate balanced and objective discussions, it is unrealistic to expect him to achieve the goal of resolving all contradictions which confront his students. Today we believe that sometimes one must learn to live, as comfortably as he can, with the choices he has to make, within the realities of everyday life, since all conflicts and contradictions cannot always be resolved.

Traditional Methods of Inculcating Values

TRADITIONALLY, adults have tried to guide the younger generation through the maze of perplexing problems involved in inculcating values and in understanding the norms of our society through three approaches.

The *moralizing* approach is based on the belief that adults have acquired a set of values that their experience has led them to believe can be transmitted to the younger generation. These "ready-made" values are believed to prevent youths from choosing less desirable or more risky values.

Even if youths try to live up to adult values, they are confused because there is often a wide gap between what people say and what they actually do. Adults talk about honesty, love, and peace; youths observe dishonest behavior, hate, and fighting.

In addition, groups—parents, peer groups, mass media—offer different values they feel are desirable. Teachers, even within the same school, consciously or unconsciously advocate different sets of values. Unless students have learned how to make decisions, they have no basis for selecting their own sets of values.

The *model* approach is based on the belief that if the younger generation comes into contact with "model" people who have

sets of values they would care to emulate, it might want to adopt these values.

But there are many models to choose from—parents, peers, football stars, teachers, and so forth. How will a younger person decide among them? How can he develop his own sense of identity? How can he relate to people with different sets of values?

Because no one set of values will suit everyone and young people have to find a set of values which will work for them, the best approach is not to interfere, but to let the younger generation muddle through—eventually they will turn out all right. This is often referred to as the "*hands off*" approach.

However, youths left on their own are often confused. Although they do not want adults to structure their lives, they appreciate help.

A Current Approach to Learning About Values

MANY teachers have found that the traditional approaches to valuing are often not effective. Values are not learned by having students memorize sets of rules, by references to models, or by a passive attitude of noninterference. Though it is important for students to be aware of norms, that is, of the comparative differences among people and cultures, this information alone is not sufficient for developing a sense of values.

"Values clarification" is a current approach to help students understand the process of defining their own value systems. Although the term is a comparatively new one, the ideas it implies have always been practiced by parents and teachers who have tried to help the younger generation to cope with life's problems by having them learn to think things through for themselves—to think about what a value is and what a value decision really means. Effective teaching also requires teachers to honestly examine their own values.

What is new in values clarification is the attempt to develop these ideas on a systematic basis. Thus, values clarification can be defined as a decision-making process to help people (teachers and other adults as well as students) to help themselves to seek

answers to important questions in the here-and-now. Some of these important questions are:

- Who am I, where am I, where am I going?
- What do I really believe in?
- How strongly do I believe in these values?
- How does my personal set of values relate to those of my parents, my friends, my religious group, my community?

If the process of values clarification is allowed to go on in the classroom, students will get to know themselves and each other better and will be helped in developing that part of their personalities we call self-concept.

Specifically, the process of values clarification will enable students to do the following things:

- Formulate a statement of beliefs that accurately reflect their own values.
- Defend their statements and maintain their values even when they differ from those of their peers.
- Ask questions of others about their own and other's values.
- Seek information when experience and observations conflict with values.
- Alter their value positions on the basis of new experience and information.
- Discuss alternative values.
- Understand the intensity of their values, and the intensity with which values are held by others.
- Act on their values and examine the effects of their actions.
- Explain how and why peer pressure influences values.
- Openly express their values in public.

It should be emphasized that the goal of the values clarification process is to help to develop in students a sense of self-worth, a realistic means of coping with anxiety and stress, and a stronger basis for affirming their own sense of values. The process is not intended to develop in students a value system in conflict with the values of their family, their religion or the cultural group of which they are a part, or to impose upon

them, by the teacher, a set of values not of their own choosing.

Values clarification should begin as early as the first and second grades and continue, using situations of greater complexity as students mature, to increase their ability to reason and expand their experiences. There are two basic motivational approaches to the values clarification process. They are often referred to as the structured approach and the unstructured approach.

In the *structured* approach, the teacher sets aside time to show a film, a filmstrip, to read a story, or to pose a situation that requires value judgments.

In the elementary grades, situations involving general value areas, rather than alcohol itself, are more effective because they relate more directly to student experiences. A plausible situation might be developed by the teacher.

For example, the students in the class know that one of the rules is not to hit another child. John was always getting punched. His parents told him to hit back anyone who punched him first. Ben punches John in the belly.

What should John do? Should he punch Ben back? Why or why not? Should Ben be punished? How and why? Should John's parents get mad if he disobeys them and doesn't hit back? Why?

The questioning process is extremely important. Until the teacher feels comfortable in developing this kind of approach, he might develop a check list for asking himself and the class key questions, such as:

- Does the class completely understand the situation? How do the participants feel and think?
- Specifically, what is the conflict that exists? What actually is creating the problem?
- How do you always focus on the key issue? How do you exclude extraneous matters?
- What choices does the situation offer? What are the possible alternatives? (In considering the alternatives, does the class understand that a decision not to act is a possible alternative?)
- What are the consequences if each alternative is completely

acted out? Who is most affected by each alternative? What difference does it make, and to whom, if one solution is chosen over the others? Are these differences important? Are they worth fighting for?

On the secondary school level, the teacher might set up a series of role playing profiles. An example:

You've been dating a girl and you like her very much. Every time you are invited to dinner at her home, or even visit her, her parents practically insist that you have a drink. You don't like to drink, and the parents don't offer their daughter a drink, but you get the impression that they feel it's "manly" for a young man to drink. You've been accepting a drink or two in the past, but you're getting uneasy about the situation, but you don't want to insult their hospitality or create bad feelings between the girl and her parents. You're on your way to pick her up at her house. What are you going to do?

In the *unstructured* approach, the teacher is alert to happenings in the classroom and encourages students to talk about experiences both inside and outside of the classroom that involve value issues. Instead of hypothetical situations and teacher-assigned projects, the activities should come from the experiences and interests of the students themselves. However, the teacher must make sure that he has enough experience to control the relating of personal experiences so that the discussion does not become embarrassing to the students or put the teacher in an awkward position. It is suggested that the unstructured approach be used cautiously until the teacher has attended special courses on the subject and has benefited from observing more experienced teachers.

Teachers who would like to decide whether the values clarification process may be useful in their own teaching situations will find the following references useful:

Raths, Louis E., Merrill Harmin, Sidney B. Simon. *Values and Teaching*, Columbus, Ohio: Charles E. Merrill, 1966

Simon, Sidney B., Leland W. Howe, Howard Kirschenbaum. *Values Clarification: A Handbook of Practical Strategies for Teacher and Students*, New York: Hart Publishing Company, Inc., 1972

Simon, Sidney B., Merrill Harmin, Howard Kirschenbaum. *Clarifying Values Through Subject Matter*, Minneapolis, Minnesota: Winston Press, 1973

Alcohol as a Drug

ALCOHOL ITSELF

THERE are many chemical compounds which are called alcohols. The principle active ingredient in all alcoholic beverages is one type of alcohol, ethyl alcohol. It is also known as ethanol or grain alcohol. In chemical shorthand it is often written as C_2H_5OH or CH_3CH_2OH. It is a relatively simple organic molecule.

The word "alcohol," as used in this resource book, refers to "beverage alcohol" or "alcoholic beverages." The term "beverage" applies to any liquid that we drink, especially a liquid other than water itself. In addition to alcohol, commonly used beverages are coffee, tea, milk, fruit juices, and a variety of carbonated and uncarbonated drinks.

The simplest and most precise way to designate any substance is to call it by its specific name—alcohol, coffee, tobacco, aspirin, salt, sugar, meat, fish, eggs, and so on. However, there is an almost universal human tendency to classify things into groups. Thus meat, fish, eggs, cheese and beans are often referred to as protein foods, although they differ from each other in many ways, and can be classified in a number of different ways. Similarly, certain substances, which have some characteristics in common, but which also differ among themselves in many respects, are classified as drugs.

The term "drug" means different things to different people. To some people, for example, alcoholic beverages, coffee, and

tea are simply common beverages; others call them drugs. Professional people in different fields define the word in terms of their own disciplines and experiences. Complicating efforts to determine the effects of any substance in the real world is the fact that most people are multiple users of substances such as caffeine, nicotine, alcohol, tranquilizers, sleeping pills, and aspirin. Thus the effects of any one substance may be changed by the use of others. Since most people use one or more of these substances, the term "drug user" applies to most of us and not taking any drugs at all represents, in our society, a rare pattern of behavior.

A scientist, such as a biologist or a pharmacologist, might tell us that a drug is any substance that a person eats, drinks, or takes by sniffing or injection, that produces some change in his body. Under such a broad umbrella, food, vitamins, hormones, pesticides, nicotine (in tobacco), caffeine (in coffee, tea, cola drinks), alcohol, and a variety of other substances are "drugs." Almost anything might be called a "drug."

Even the use of foods, when taken in excess, or in insufficient quantities, or limited to substances lacking essential nutrients, can be abused to the point of being dangerous. Among substances not commonly thought of as drugs, ordinary table sugar, for example, is getting recognition as a substance that can be abused. Sugar has been implicated in a wide variety of human ailments. Some physicians even believe that steps beyond persuasion may have to be taken to prevent sugar-dependency.

Even water can be abused. Although extremely rare, some mentally ill patients have a water-drinking compulsion called psychogenic polydipsia. It occurs when too much water is taken under conditions that make it impossible for the kidneys to get rid of it quickly enough. Some symptoms of "water intoxication" may resemble those of alcohol intoxication and since the condition has been known to occur as a complication in chronic alcoholism it has sometimes even been difficult for physicians to make a proper diagnosis.

WHAT IS A DRUG?

The many inter-related aspects to be considered in discussing drugs has been summarized by Dr. Bernard Barber, Professor of Sociology at Barnard College, Columbia University, in *Drugs and Society* (Russell Sage Foundation, 1967):

> The meaning of something that is called a "drug" or not so called, always has to be studied in all three of these inter-related aspects: the physiological, the psychological, and the social.
> Not only can nearly anything be called a "drug" but things so called turn out to have an enormous variety of psychological and social functions—not only religious and therapeutic and "addictive," but political and aesthetic and ideological and aphrodisiac and so on. Indeed, this has been the case since the beginning of human society. It seems that always and everywhere drugs have been involved in just about every psychological and social function there is, just as they are involved in every physiological function.

With specific reference to alcohol, many authorities believe that the psychological and sociological factors are even more important than the physiological factors in determining an individual's reaction to alcohol, and that they are also key factors in determining the use, nonuse, and circumstances and patterns of use. The psychological and sociological factors involve:

- The psychological characteristics of the individual
- The reasons why he uses alcohol
- The expectation of what the effects will be
- How the individual views the use or nonuse of alcohol as contributing to, or interfering with, his important life goals
- How his friends, his specific sub-culture and his society look upon and react to his use or nonuse of alcohol

THE COMPLEXITY OF CULTURAL PREFERENCES

The behavior of most cultures towards alcohol is not clear-cut and simple, but involves a patchwork of complex interrelationships. The importance of the many inter-related aspects involved in determining whether and how a society uses or does not use alcohol is often difficult to explain to students who do not have the maturity or the background to fully grasp this point. An interesting example of how even the drinking of a substance universally accepted by Americans varies from culture to culture might help to focus on the need to understand the complexity of factors involved.

No more widely accepted and universally used product exists in this country than milk. While some health specialists are finding a relationship between the fats in milk and heart disease, and are suggesting the use of low-fat milk and milk solids, instead of whole milk, the fact remains that in our culture the use of milk, for both youths and adults, is associated with good nutrition. Adolescents particularly, drink all kinds of shakes and malteds in addition to using milk as a refreshing beverage and as a breakfast food with cereal.

It is therefore difficult for us to imagine that the use of milk other than for infants is rejected by most cultures. Among Chinese, anthropologists have found, the reaction to the thought of drinking milk is about the same as Americans might react to the thought of drinking a glass of blood (a food used by African tribes, such as the Masai), or to the way some people might react to the thought of drinking alcohol.

In the case of milk, the simplest explanation is the physiological one. The digestion of milk depends on the presence of an enzyme called lactase, which is produced in the lining of the small intestine. Lactase changes the complex sugar in milk, lactose, to a simple sugar. In most humans, except for American and European populations, and in most mammals (the cat is an exception), production of lactase declines after weaning. Some scientists explain this as an evolutionary adaptation to discourage

the young and adults from competing with infants for mother's milk.

In people lacking lactase, drinking of milk produces gas, swelling of the abdomen, and diarrhea. Thus our well-meaning attempts to improve nutrition in a number of countries have sometimes resulted in gastric distress instead of improved nutrition. In Guatemala, powdered milk was found most suitable for whitewashing houses. Navajo Indians threw it away. One tribe in Nigeria refused to use it because it contained evil spirits. In Colombia, high absenteeism among school children followed the arrival of powdered milk. In Bali, milk is used as a laxative.

It has been found that lactase-deficient populations can drink milk without distress if they continue the uninterrupted consumption of milk from infancy to adulthood. In this case, lactase production continues. Thus any population that has the desire and the capacity to develop a dairy economy could learn to use milk without distress. But the cultural aversion which initially exists would be difficult to overcome.

Regardless of the full explanation for this interesting cultural phenomenon, the fact remains that choices of seemingly arbitrary cultural preferences for many substances, including alcohol, are determined by complex interactions of psychological, cultural, and physiological factors.

MOOD MODIFICATION

There are many different ways of looking at drugs and there is no general agreement as to the best method of classifying them. Thus the teacher who studies the literature will find many different systems of classification. The one that we believe useful in alcohol education is the one that relates to the way people behave when they use them. There are hundreds of drugs that people use to reduce anxiety and tension, to help them sleep, to relieve pain. There are other drugs to make people feel more

alert, to increase activity, to block off sleep. Mood-modifying substances are often desirable substances used in many acceptable ways.

In performing their function such drugs change or modify what has been referred to as a person's mood, awareness, sensation, consciousness, or other psychological and behavioral functions. "Mood" is a subjective state of mind and mood modifications are difficult to describe objectively. Some mood-modifying substances produce profound changes in mood with comparatively light physiological changes as measured in the laboratory. Other mood-modifying substances produce comparatively small mood changes.

In the literature the teacher will find such terms as "altered states of consciousness," "mind-affecting," "mind-altering," "mood changing," "psychoactive," "psychogenic." In relation to drugs, they all refer to chemicals that act primarily to produce physiological changes in the brain and the central nervous system. These physiological changes, in association with the psychological and sociological environments, produce changes in thinking, feeling, and behavior. In this resource book we shall use the term "mood-modifying" in referring to these substances.

Mood modification, though, should be understood in its broader perspective. For example, teachers would like their students to always be in an alert mood—to be wide awake and aware of what is going on. It is well known that students occasionally may enter into another mood. They may be wide awake, but seem unaware of what is happening, for the moment at least. We call this changed mood "daydreaming." Sleeping and night dreaming are also different states from the "normal" mood of alert wakefulness. Such mood modifications are not symptoms of abnormalities and many people who experience them describe them as pleasurable. If they occur for only short periods of time, they fall within the norm. Many people have experienced more dramatic changes in mood such as during delirium caused by high fever. Jet pilots have reported mood modifications at high speeds. People who have undergone reli-

gious experiences report that these experiences have produced mood modifications that enrich the meaning of their lives.

During the last two decades some people in our society have developed an interest in meditation and encounter groups as "inner" paths for changing their moods, as alternatives to the use of chemical mood modifiers, such as alcohol.

Some mood modifications are difficult to explain objectively; others occur as a result of easily explained changes in body chemistry. In certain religious groups, the low blood sugar that results from extended periods of fasting contributes to mood changes. Insulin, used by diabetics to control blood sugar levels, can have a similar effect when an overdose results in the lowering of blood sugar. Prolonged lack of sleep also can result in mood modification.

Mood modification also can be obtained by the use of various "external" chemical substances, such as those found in alcoholic beverages, coffee, tea, tobacco, and cola drinks. They also include medically prescribed drugs (such as the barbiturates, tranquilizers, stimulants, narcotics) and drugs used in self-medication (such as aspirin, Bromo-Seltzer, Alka-Seltzer). Americans use such a wide variety of chemical mood-modifying substances that the nonuse of any mood-modifying substance is a rare form of behavior.

Many students have erroneous conceptions about the terms "legal" and "medical" in relation to drugs. The distinction between legal and nonlegal drugs is basically very simple. Laws constitute judgments that certain things should or should not be done in the common interest. They are generally written to protect the individual and society. If the law states that a certain drug, such as marijuana, is illegal, any person breaking the law is subject to the penalties involved, such as fine or imprisonment, or both. The laws concerning the possession and use of marijuana, for example, were written in the belief that using this substance is harmful to the individual and society. As time goes on, our conception of this substance, and the laws governing it, may change. At the moment, however, marijuana is illegal because the law says it is illegal. An individual or group may defy

the law and risk the consequences. Or individuals and groups may influence their legislatures to change the law. Such has been the case with alcohol. The use of alcohol was illegal under the Eighteenth Amendment; it became legal again when the Twenty-first Amendment was ratified. Neither amendment says anything about alcohol's being useful or harmful, good or bad.

It is more difficult to make a definite distinction between medical drugs and nonmedical ones. Medical drugs are those used for generally accepted medical reasons, whether such use is under medical supervision or not. All use not indicated on generally accepted medical grounds is considered to be nonmedical use. Thus, the occasional use of aspirin to relieve pain, such as that of an ordinary headache, is considered to be a medical use, although a prescription is not needed to buy aspirin. The use of barbiturates in large quantities, to the point of dependency, is considered to be a nonmedical use, even if a person obtained the barbiturates by means of legal prescriptions (sometimes several prescriptions from different physicians). The use of alcohol by adults of legal age is primarily for nonmedical reasons, but the use is legal. The use of marijuana today, for example, is both nonmedical and illegal. Cigarettes are an example of a substance containing a nonmedical drug (nicotine). In some states the sale of cigarettes to minors is illegal. Under such circumstances, the sale of cigarettes would be an example of an illegal act.

Teachers should encourage students not to talk about any drug in judgmental terms, such as good drugs and bad drugs; or safe drugs and dangerous drugs. Rather, thinking should be in terms of behavior that is less risky or behavior that is more risky, in relation to the particular use of the drug. For example, although aspirin is usually considered a drug which is relatively risk-free for most users, it is foremost among drugs responsible for deaths of pre-school children, who may swallow the tablets without parental supervision.

Why people should choose to modify their moods and the means they use to do so (whether chemical or nonchemical) is an extremely complex and fascinating subject. We do not know all the answers. We do know that alcohol has been for thousands

of years, and is still today, the most widely used mood-modifying substance known to man. It has been used for almost every conceivable function for which mood-modifying drugs have been used—for religious experiences; for trying to extend strength in war, sports, and physically or mentally fatiguing work; and as an authority-defying symbol.

Today the primary use for most people is for achieving a pleasurable, temporary modification of mood. Such mood modification by people who have chosen to experience it, has been described as a means of obtaining positive pleasures or relief from physical or psychic pain, such as fear or anxiety. Regardless of one's personal attitude toward the use of alcohol, the available evidence indicates that alcohol, used in controllable and moderate quantities, fulfills most of the requirements of an effective mood-modifying substance. In moderate quantities, and ingested very slowly, it temporarily changes the natural mood to produce a relaxing effect. In moderate quantities the risk of physiological or psychological harm is minimal. Nor is it socially disruptive. For most moderate users, no dependency results.

Although solitary drinking per se cannot be considered to constitute abnormal behavior, the pleasure effects of drinking are most frequently achieved through social drinking. Thus, social drinking in American society is generally considered to be acceptable behavior, capable of promoting interrelations, interactions and feelings of comradeship, security, and social acceptance. In many groups social drinking is tied into the cultural and daily routines, such as the business luncheon, the before-dinner-cocktail, the courtesy of offering guests a drink, and the integration of drinking with social and entertainment patterns.

Alcohol like all other mood-modifying substances, has potential for harm, depending on intensity, frequency, duration and purpose of use and the environment in which it is used. However, each mood-modifying substance has unique characteristics—physiological, psychological and sociological—and it is incorrect and misleading to generalize about them. Each should be considered as a distinct entity and the risk-taking possibilities should be separately assessed for each substance.

RECENT RESEARCH

During the 1960's, many terms such as "altered states of consciousness" and "mood modification" developed negative, emotional connotations because they were associated with various modes of use (experimental, moderate, heavy) of a large number of different chemical substances. During the 1970's, however, scientific research is being focused on learning much more about mood modification, not only to determine how socially sanctioned substances like alcohol can be used without being abused, but also to explore the possibilities of obtaining the effects of alcohol by alternate means, as by meditation, religious experiences, breathing exercises, and so on. We do not believe that many of the advanced ideas on the frontiers of research should be incorporated in courses in alcohol education, unless an individual teacher has had the training and experience to deal with them with assurance. However, the popular press and other communications media of the 1970's are making people aware of such research and teachers of alcohol education should keep abreast of current research so that the students' questions can be satisfactorily answered, rather than ignored.

What Happens to Alcohol in the Body

MANY of the available references on alcohol education cover the effects of alcohol in the body as topics in chemistry and physiology. Experienced teachers believe that such a scientific approach does not provide sufficient motivation. For most students, the facts themselves are boring, difficult to explain, and appear to be unrelated to real-life situations involving youths and alcohol.

Experienced classroom teachers have found a functional approach to be more effective. The motivation is elicited in terms of actual behavior. The reasons for the behavior are then related to body chemistry and physiology.

Example: Gloria, a senior, is going to her high school prom. She is understandably nervous, and doesn't eat dinner. When Paul picks her up, he suggests that they stop for a few minutes to say "hello" to some friends at a pre-prom get-together. Gloria is offered something bubbly to drink. She has several drinks rather quickly and says she is very dizzy and feels sick. Paul becomes alarmed and decides to take her back home. Gloria's parents are very upset.

Alcohol is a food in the sense that it is oxidized in the body to liberate energy and provide heat, similar to the way fats and sugars are oxidized. Students who have learned about the digestion and use of other foods, like meat, bread, and candy, will

have to do a bit of re-learning if they are to understand what happens with alcohol, because once an alcohol beverage is swallowed, the body handles and reacts to it in some unique ways.

Most other foods are quite complex and undergo complicated digestion processes, often taking hours, in the stomach and small intestine, before they are sufficiently soluble to get into the blood. Alcohol is a very simple chemical compound which requires no digestion. It is ready for use when swallowed and begins to circulate in the blood within minutes. Its presence can be detected in the bloodstream in as little time as five minutes after drinking. Something like 20 percent of the alcohol goes into the blood directly from the stomach; the rest enters the next part of the digestive system, the small intestine, and also gets into the bloodstream rather quickly, but the rate at which it enters varies, depending on such factors as the strength of the drink, the rate at which it is ingested, and the amount of food in the stomach.

Once in the blood, the alcohol circulates to all parts of the body. There is such a large volume of blood that the alcohol is diluted and only a very small amount enters the cells at any one time—not enough under ordinary circumstances to cause any damage or noticeable effects in most organs of the body.

The brain, however, is very sensitive to the effects of alcohol and even the amount contained in one or two drinks causes some interference with the brain's normal functioning, beginning within a half-minute after swallowing. Even the alcohol in one or two drinks begins to have some effect on judgment, reasoning, and muscle control, in that order.

Concentration and memory, hearing, sight, and touch may be impaired. Muscular coordination may be affected so that it takes longer to perform such activities as stepping on the brake when driving. Because judgment is impaired, a person may not realize that he is being affected.

A drink or two causes a person to experience minor physiological changes such as a slight flushing of the skin, a feeling of warmth, and an increased tendency to urinate. On the psycho-

logical side, the effects of one or two drinks make a person feel more relaxed, enable a shy one to participate more readily in conversation, and produce a general feeling of well-being or euphoria.

These effects, with small amounts of alcohol, are very temporary, but vary considerably, in both time and intensity, depending on the interrelationships of the physical, psychological, and sociological factors relating to any specific individual. If drinking is not continued and the brain goes back to its normal functioning, the effects of a drink or two disappear in an hour or two, with no damage or any other effects. This happens because the circulating alcohol is used up completely and rather quickly in a manner similar to the way the body oxidizes other foods, like sugars, starches and fats, that produce energy. In oxidation, the food combines with oxygen to release heat and energy. Carbon dioxide and water are given off as waste products.

There are three essential steps involved in the oxidation of alcohol. The first step takes place in the liver. The liver handles alcohol rather slowly, at a more or less constant rate. It takes about an hour for the liver to do its work on about half an ounce of alcohol—the amount present in one twelve-ounce can of beer or in a glass of wine or in one highball. There are individual differences, but the variations are quite small. Thus any drinking beyond this rate keeps some alcohol circulating in the blood until the liver can process it. For all practical purposes, there is nothing known that can make the liver hurry up to do its work more quickly. In the meanwhile the excess alcohol just keeps circulating, affecting the brain in particular.

During the first phase the liver changes the alcohol to a toxic chemical called acetaldehyde. The next phase involves the conversion of acetaldehyde to acetate (which is related to the acetic acid contained in substances such as vinegar). Normally this process, which occurs in the liver, as well as in many other cells of the body, takes place fairly rapidly, but if there is too much alcohol, it may accumulate for a time. The effects of the acetaldehyde, combined with those of the still remaining

alcohol, are often cited in the literature as an explanation for the occurrence of the "hangover." Although the exact cause is not known, acetaldehyde is not a factor because it is not present for more than a total of one half a minute or less.

The third, and final step, involves the oxidation of the acetate to carbon dioxide and water, producing heat and energy. Carbon dioxide is the same gas that we breathe out in ordinary breathing and has no odor. Very little alcohol as such passes out of the body through the urine, lungs, or skin.

Misconceptions About Alcohol and Drinking

ALCOHOL AS A DEPRESSANT

ONE of the persistent myths about the short-term mood-modifying effects of moderate drinking is that the effects are produced because alcohol is a stimulant. This erroneous conception arises because alcohol "stimulates" talkativeness, excites feelings, gives pleasurable or "loosening up" effects, simulates a sense of "flying," or creates a feeling of relief from tension.

Actually these effects occur because alcohol affects areas of the brain that normally regulate inhibitions, judgments, and self-control. Alcohol lowers, decreases, restrains, or depresses these inhibitions so that the individual becomes less capable of exercising judgment or self-control. His thought processes become temporarily impaired, his perceptions distorted, his reflexes dulled. With the loosening up of inhibitions, the extremely delicate balance between controlled or restrained behavior and uncontrolled or unrestrained behavior is upset and a person may become inclined to take risks and attempt to do things (engage in "uninhibited" or "disinhibited" behavior) that he might ordinarily not do if his judgment were not impaired.

Thus alcohol functions as a central nervous system depressant, just the opposite of the way a stimulant functions. (A stimulant is a chemical which increases the activity of the central

nervous system, resulting in heightened thought processes, sharper perceptions, and reflexes. Caffeine and nicotine are generally classified as stimulants.) It should also be noted that although research has not fully explained the precise mechanism involved, there is some evidence that in small quantities alcohol may have other than depressant actions only. Some current research indicates that alcohol may activate the central sympathetic nervous system, leading to the expansive and euphoric feelings commonly associated with small quantities of alcohol.

This description in its entirety may be too difficult to attempt in many classes, but it is important for students to know about the lowering of inhibitions and the temporary loss of self-control that results from the use of alcohol. The teacher may wish to simplify and summarize such a discussion by noting that there is a harmonious and delicate balance in the brain among mechanisms that regulate self-control and that alcohol temporarily and quickly upsets this balance.

THE SMELL OF ALCOHOL

There is a popular misconception that the smell of alcohol can be detected in the breath of someone who has been drinking. Actually, the odor of beverage alcohol is caused by the variety of nonalcoholic chemical substances called "congeners" which are present in most alcoholic beverages. Some of these come from the original grains, grapes, or other natural products used. Others are produced during the process of fermentation, or during distillation or storage. Although present in relatively small quantities, some distilled spirits may contain as many as 200 congeners, and more than 300 congeners have been identified in wines. In addition to naturally occurring congeners, flavors may be added which affect smell and taste.

ALCOHOL AND NUTRITION

Most foods, if taken in excess, are stored in highly concentrated forms (glycogen and fat). Alcohol, however, is not stored in the body, but is oxidized continuously until it is disposed of in a matter of hours, depending on how much is taken. It provides what nutritionists call "empty" calories—pure energy without the proteins, minerals, and vitamins essential to life and health. Dependence on alcohol can lead to dietary deficiencies because heavy use decreases the appetite for other foods. The effects of excessive drinking are often the result of inadequate nutrition.

Thus alcohol itself is not fattening, contrary to a popular misconception. However, it can be an indirect factor in obesity. Alcohol oxidation results in the immediate release of calories and in the formation of glucose or fat from the two carbon fragments of the acetate oxidation. The net effect is that other foods, which could provide calories, are not needed immediately by the body, and are stored, usually as fat.

Alcohol in moderate quantities also has a relaxing action which may increase the appetite. At the same time, alcohol's sedative action may reduce feelings of anxiety that might interfere with a person's appetite.

THE SAFETY OF ALCOHOL

Some people believe that drinking too much leads to death. It is true that the long-term excessive use of alcohol leads to very serious problems, and death may result as a complication of alcohol-related factors. It is also true that if a person rapidly gulps down an unusually large amount of alcohol (more than a pint), it may kill him.

However, death from using too much alcohol at one time is very rare. There are occasional reports of children or adolescents who die of respiratory failure following alcohol overdose. However, considering the large number of people who drink and the large volume of alcohol consumed, the available data lead to the conclusion that alcohol is a relatively "safe" drug, in comparison with the opiate narcotics, for example, because it is almost impossible to drink an acutely toxic amount of alcohol before vomiting or unconsciousness occurs.

The comparative safety of alcohol may also be related to its dual properties as a drug and a food. Alcohol does contain calories and is metabolized like other carbohydrates. The principle enzyme (alcohol dehydrogenase) responsible for alcohol metabolism, is widely distributed throughout the body and is most highly concentrated in the liver. The lethal toxic potential of alcohol is thus counteracted by nature's provision for its rapid metabolism.

ALCOHOL AND SEX

The effects of alcohol on sexual functioning is a topic of interest to youths and has been the subject of many conceptions and misconceptions in literature. Shakespeare's observation, in Macbeth, is still valid: "It (drink) provokes the desire, but it takes away the performance."

Scientific research has added a few observations, but has perhaps not improved Shakespeare's language. Alcohol tends to lower the normal inhibitions and decreases anxiety, making a person more inclined to engage in more risk-taking behavior than he would ordinarily attempt. However, the available evidence indicates that alcohol generally decreases the ability to perform the sexual act. Alcoholics are usually described in the literature as experiencing diminished desire and activity and even sexual impotence. The data indicate that chronic alcohol abuse may impair

sexual function through a disruption of the activities of the sex hormones.

Today, with growing tolerance in some segments of our society regarding more permissive attitudes toward many activities, including sexual, the natural inhibitions may be loosened by nonchemical means (fewer psychological "hang ups"). Thus it has been suggested that the need for and use of chemical substances such as alcohol as real or imagined means of lowering inhibitions, may decrease in importance in the present psychological and sociological environment.

Why People Choose to Drink—And Not to Drink

CHOOSING not to drink—and choosing to drink sensibly, responsibly, and appropriately—are equally acceptable choices in our society. But making a choice whether to drink or not is not the most difficult part of the problem facing our youth. The most difficult part of the choosing process is learning to live comfortably with the choices made. Young people will be more comfortable if they have the knowledge and assurance that the choices they have made are based upon sound knowledge and clear thinking about values and risk-taking behavior.

There are many physiological, psychological, and sociocultural factors involved in choosing to drink or not to drink. Although these reasons can be neatly categorized on paper, for any individual in the real world there may exist complex aspects and interrelations that remain elusive and puzzling, and are often subject to change.

PHYSIOLOGICAL FACTORS

Some youths say that they drink because it helps them to relax and to reduce physical discomforts and their accompanying tensions. Drinking helps them to obtain relief from fatigue. Some like the taste of alcoholic beverages.

Some youths may abstain because they believe drinking may possibly do harm to their bodies or to their minds. They may not want to engage in any activity that will make them lose conscious control, to even the slightest degree, even for a short period of time. They may have experimented and found that they do not like the taste or effects of alcohol.

PSYCHOLOGICAL FACTORS

Many publications refer to the search for meaning in a complex society as a basic reason for using alcohol. Each generation has its own long list of frustrations—currently included are urban and environmental problems; conflicts about our country's military and economic involvement in foreign lands; concern about the values of education; the difficulties of finding a job and the changing values in relation to work once a job is found; pressures relating to solving problems and the self-questioning of their ability to cope.

These may be the reasons people often give for continuing to drink, but initially youth begins to experiment with alcohol for the same reasons that have existed for thousands of years. Youth is the time for exploration and experimentation. Young people are full of life and curiosity, including the desire to experience change in mood resulting from small quantities of alcohol. At times they want to be serious and to be taken seriously, but they also want to have fun, to experience sensual and aesthetic pleasures, as well as intellectual ones, to experience adventures, and to do all kinds of things that involve risks, as well as bene-

fits. In short, to feel like, and want to be treated as adults. They are also strongly influenced by their peers.

Alcohol is one of the things that often whets their curiosity. Many decide to try it. Some may give it up after a short time. They may find it does nothing for them—it doesn't taste good, it makes them feel bad, it gives them guilt feelings.

Others may find during the period of experimentation that the benefits for them outweigh the risks. Alcohol makes them feel less shy and more sociable. It makes them feel they are members of the group and gives them peer status or adult status. It helps them to mask an inferiority complex or to rebel against real or imagined grievances.

As for the decision not to drink, fear of possible ill-effects of drinking, either temporarily or permanently, may be a motivating factor. After the evaluation of objective evidence regarding the possible effects of drinking, it is still up to the individual to decide how he will act on the basis of the facts and his personal attitudes and beliefs. If he decides to abstain because of possible ill-effects, it is his decision to do so. He may decide not to drink because in his particular environment, in his peer group, drinking is not the "thing" to do. He may look upon drinking as a social "crutch" and feel socially poised without this aid, even where others are drinking.

SOCIOCULTURAL FACTORS

Some people do not really care about alcohol and its effects one way or another—they drink because others are doing so and they feel more comfortable in conforming. They experience subtle but important temporary effects, it is true, but the experiencing of these effects is not the primary motivation for drinking.

Alcoholic beverages are socially acceptable, they are part of the life of many cultural groups of our country. The media of

communication—television, radio, movies, magazines, newspapers—contain situations in which alcoholic beverages are incidental or prominent aspects of people's normal lives. This theme is also a prominent one in advertising about alcoholic beverages.

The use of alcohol is a long-established custom in family, religious, business, and social groups and people feel more comfortable if they are part of the group, rather than outside.

Sociocultural factors involved in the decision not to drink may include family, religious, economic, social and legal aspects.

Some youths know that drinking, for religious or other reasons, is not considered appropriate behavior by their parents and they respect the point of view of their families.

The cost of alcohol may be a reason for nondrinking; some youths may feel they can put their financial resources to better use. Some may feel that drinking may interfere with their academic or vocational ambitions. However, classroom discussions should not be limited to the aspirations of college-bound students. Youths in urban ghetto areas, for example, should also be made aware of the relationship between drinking and job responsibilities.

Some youths may choose not to drink because they believe the school and the community frown upon the practice.

Some youths feel more comfortable if they obey the laws in their community regarding age and other restrictions on the use of alcohol.

MAKING MORE COMFORTABLE CHOICES

Regardless of the reasons youths may choose to drink or not to drink, they will feel more comfortable in their choices if they are asked to consider the following factors as part of the decision-making process:

- Think out your own reasons. You will feel more comfortable if you take the time to carefully come to your own decision

after weighing all the factors involved. If you decide to drink or not to drink for any reason you think is sensible, stick to your decision.

- Take a positive approach. No apologies are needed for deciding to abstain. It may require courage at times when you are under pressure by your peers or your host. For example, you may feel that you may be embarrassing your host by refusing his offer of an alcoholic beverage. You will find, however, that today's thoughtful and gracious host makes provisions for guests to easily choose between alcoholic and nonalcoholic drinks. Under any circumstances, there is nothing wrong in asking, "May I please have a ginger ale?" (Or orange juice, cola drink, or other soft drink.)
- Respect the choice of others. If others feel differently about drinking, respect their choice.
- Expect others to respect your choice. The right to choose is reciprocal—you have the right to expect others to respect your choice, just as you should respect the choice of others. Any other decision in this regard is irresponsible behavior on both sides.

It is also important for youths to understand that choices, after careful consideration of all the evidence involved, may not always be made on the basis of scientific evidence alone. For example, the evidence at present indicates that moderate drinking does not involve any physical or mental deterioration or lead directly to the abuse of alcohol. Nevertheless, any one individual may sincerely believe that even moderate drinking may cause him harm. Such an individual is perfectly free to make his personal choice to abstain and his choice should be respected if he is comfortable with his reasons and his choice.

Nor should a person feel that a choice, once made, need be permanent or absolute. The choice "not to drink" may change with time and circumstances. Similarly, the choice "to drink" may change to a choice "not to drink" at another time under different circumstances. Thus the choice to change is an acceptable one, if the person is comfortable with that choice.

Drinking with Low-Risk Potential

FOR those who understand their reasons for drinking and who choose to drink, the key to drinking with low-risk potential (responsible behavior) can be summarized in one sentence. For any person, to drink with low-risk potential means to know himself and his own limitations in regard to drinking (to have a high self-esteem) and to consciously control his drinking.

In a sense, the inculcation of this attitude is opposite to that involved in most other learning situations, in which students are encouraged to think, in the words of the poet Robert Browning, that "a man's reach should exceed his grasp." For alcohol education, we would suggest that if a person makes a choice to drink, his reach should *not* exceed his grasp.

Though any one person's "reach" may differ from that of his fellow men, there are general guidelines that apply to all people who choose to drink in a responsible manner.

We shall now summarize some of the factors involved in maintaining conscious control. (People who have lost conscious control will be discussed in "Drinking With High-Risk Potential.")

SPEED OF DRINKING

Sipping an alcoholic beverage by taking a full hour or more to finish one drink is the safest way to drink, if one is to drink. At this rate the body will be able to get rid of the alcohol at the same rate at which it gets into the bloodstream and only very slight effects are likely to be felt. The same one drink, if quickly swallowed, will get its alcohol into the blood very quickly. Its effects will be quickly felt. It will still take an hour for the feeling to wear off, for all the alcohol to leave the body.

A "drink" is difficult to define exactly because different drinks have different amounts of alcohol. Despite these differences there is considerable uniformity, dictated by American customs and laws regulating the size of containers, that determines the amount of alcohol available in one drink. About one-half ounce of alcohol, which can be handled by the body in one hour, is contained in a twelve-ounce container of beer, four ounces of ordinary light wine, two and one-half ounces of fortified wine, such as sherry or port, or one ounce of distilled liquor. The conventional "shot" glass measures one ounce; the "jigger" an ounce and a half; many drinking establishments entice customers with "double" drinks. In the case of distilled liquors, the actual amount of alcohol depends on the proof—ranging from 80 proof (40 percent alcohol) to some rums of 150 proof (75 percent alcohol).

It is not suggested that teachers convert students into mathematicians and chemists by teaching them to determine the exact alcoholic content before they take a drink; other factors which we shall explain vary the actual effects. Nor is it realistic for a teacher to preach that a single drink be stretched out over a period of one hour. A thirsty person after a hard day's work may not consider it very practical to spend two hours drinking two beers. A glass of wine used as a toast cannot often be stretched out for an hour. However, a person has a choice, if he so desires, of only sipping a few drops at a time, rather than

rapidly gulping down the entire drink; or of limiting his total consumption to a token sip.

KIND OF DRINK

Different kinds of drinks, each containing identical amounts of alcohol, act quite differently. A drinker can swallow a can of beer almost as quickly as a shot of whisky, but he is likely to take much longer to do so. As mentioned previously, many alcoholic beverages contain a variety of natural substances called "congeners." Congeners either directly affect the body, or they affect the rate at which alcohol gets into the blood and the rate at which it is used up. Higher alcohols (known as fusel oils), although present in small quantities in many beverages, are relatively toxic.

In general the higher the concentration of congeners, the slower the absorption into the blood. On the other hand, the higher the concentration of alcohol, the more rapid the absorption. The net result is that beer and wines have slower effects than distilled liquors.

Mixing drinks with carbonated beverages or drinking beverages containing carbon dioxide such as champagne increases the rate of absorption; mixing drinks with liquids such as water decreases the rate of absorption.

EATING

Eating a substantial meal (not a cracker or two), or drinking a protein food like milk, shortly before or during drinking, retards the absorption of alcohol, resulting in a reduction of blood-alcohol concentrations by as much as 50 percent. Thus drinking

on an empty stomach is less desirable than using alcohol as an integral part of a meal.

This consideration also helps to answer the question—when is the best time to drink? Although alcohol has the same effect regardless of the time of day, American social custom often dictates that drinking be associated with pre-dinner or dinner activities—at which time the heaviest meal of the day is eaten.

OTHER DRUGS

Teachers do not have the professional qualifications to get involved in areas which are the responsibility of the physician. Students should be cautioned, however, not to take any medicines, drugs, or druglike substances when they have been drinking, without medical advice. Some drugs may increase alcohol's impact. Many commonly used cold or cough remedies contain antihistamines which may double or triple the effects of the alcohol alone. Aspirin, in conjunction with alcohol, may irritate the stomach and trigger other uncomfortable effects. Other drugs, if combined with alcohol, may also cause adverse effects. Sleeping pills or barbiturates are especially dangerous when used with alcohol.

PHYSIOLOGICAL FACTORS

Each person has an individual pattern in relation to body functioning which will affect how he reacts to alcohol. Some people can drink much more than others and be less affected. Thus an individual must be aware of his limitations and not try to use any one else as a guide for his own drinking behavior.

The effects of alcohol are also related to body size. A larger person has more blood and other fluids than a smaller person. The same amount of alcohol for a large person will thus be more diluted in the blood and tissues and a lesser effect will be felt. By a large person we mean one who is more heavily built—one who has a large frame. But the relationship does not hold for a person who is heavier because he is fat. Fat tissue has a lower water content and cannot dissolve its share of alcohol. Therefore an obese person is more susceptible to the effects of alcohol than a lean person having the same body weight.

PSYCHOLOGICAL FACTORS

In addition to the physiological factors, there are a number of psychological factors relating to both the individual and to the environment in which he finds himself that determine the effects of alcohol.

Each individual has an internal environment which includes his personality, his life style, his sense of values, his philosophy and his past experiences with alcohol and other drugs. This combination of factors relating to the internal environment is often referred to as the individual's "set," or mental set.

Each individual is also not a world unto himself. He lives in an external environment with other people. This external environment is often referred to as the "setting." The effect of alcohol on a person's behavior is quite different when it is used as part of a religious function than when used at a beer party.

Set and setting may be more important than the purely physiological effects, in determining alcohol behavior. A person may feel relaxed and sleepy after a few drinks; the same person under different circumstances (in congenial company, for example), may be psychologically stimulated and aroused by the same amount of alcohol.

That expectations and desires often have a more powerful

effect than the physiological effects alone is confirmed by a number of experiments in which a person is given a non-alcoholic beverage, but told he is drinking alcohol. He often behaves as if he were actually drinking.

A few examples may help to make clear how psychological factors may influence alcohol behavior.

A person's mood can affect his drinking behavior. If he is emotionally at ease and feels comfortable about himself, he is likely to stop after he feels the relaxing effects of one drink. If he is tense or angry, he may feel pressured to continue drinking until his mind no longer focuses on his problems.

Reasons for drinking may also affect his reactions to alcohol. A person who is looking for an excuse to "act up" may unconsciously exaggerate the effects alcohol has on him and behave in accordance with these expectations. A person who boasts that he can hold his liquor may succeed, at first, in masking the effects of alcohol. He may continue to drink so much that his behavior is no longer under conscious control.

A person who has had previous experiences with alcohol has learned when it is beginning to interfere with his judgment and coordination. He will be in a better position to know when to control his behavior—when to stop drinking. On the other hand, the inexperienced drinker does not have a clear idea of how he will personally react to alcohol under different settings, nor has he learned when to stop. He may drink more than he can safely handle and lose control of his behavior.

SOCIOLOGICAL FACTORS

An understanding of alcohol dependency in American society is complicated by the fact that our society is a pluralistic one composed of individuals from widely differing cultures. On the other hand, this diversity provides a huge laboratory for analyzing the habits and attitudes that separate problem drinkers from

those who are abstainers or whose drinking does not result in alcohol-related problems. Although the research to date is far from complete, it does provide clues for developing both short- and long-range responsible attitudes toward the use of alcohol.

In general it appears that the rate of alcohol dependency is low in those groups in which the "ground rules" relating to alcohol are sanctioned by the group, and known to the individual. This applies to both abstinent and drinking groups. For example, most Mormons and Moslems do not drink because of religious beliefs; the rate of alcohol dependency in these groups is low. Among Italian, Jewish, and Chinese groups, a larger percentage of the population drinks—and the rate of dependency is also low.

Where a conflict develops between the group sanctioned values and individual behavior, the accompanying pressures, guilt feelings, and uncertainties, may result in a high rate of alcohol dependency. This has been found in the case of the relatively few Mormons who drink. In moderate drinking groups, where the two parents have widely differing attitudes about drinking, alcohol dependency among children is higher than in families where such ambivalence does not exist.

Although the full significance of the sociological factors has not been fully assessed, more appropriate behavior related to alcohol appears to be associated with the following group habits and attitudes:

1. Abstinent groups with firm convictions refuse alcohol with no conflicts. When offered a drink, members have no ambivalent feelings about declining. Their attitude is similar to that of an orthodox Jew who will decline the offer of a nonkosher food.

2. Parents who drink moderately in a social context attach no particular moral importance to the act. Alcohol is used as an adjunct to meals and diluted with large amounts of nonalcoholic liquids. Where children are permitted to drink, they are only given very small quantities, always under parental guidance. Excessive drinking is not acceptable, nor is it viewed as a proof of adulthood or virility.

Each teacher will have to decide how much of this discussion

on the effects of alcohol in the body is to be included in learning about alcohol—in relation to class interest and maturity levels. One summary thought might be noted. Because alcohol in small or moderate quantities gets into the bloodstream so quickly and is oxidized so rapidly, the practical effect of one drink, for example, results in a condition which might be very roughly described as "instant intoxication and instant sobriety." That is, the initial concentration of alcohol in the brain makes a person "feel good." Then, perhaps five or ten minutes later, as the effects begin to wear off, the person no longer feels that high and he takes another drink.

Young drinkers, who have had only limited experience with alcohol and who do not understand what is happening to them and why, may tempt themselves to overindulge. Even that one extra beer might possibly impair judgment sufficiently to increase risks when working with machinery, of accidents while driving, or of fires when smoking.

Drinking with High-Risk Potential

WHILE no absolute distinctions can be made, there are patterns of drinking that carry with them high-risk probabilities and that may result in problem-behavior potential. While the dividing line between moderate drinking and excessive drinking is often a hazy one, it is possible to describe ranges of alcohol use that involve high-risk potentials.

It is important to emphasize that the behavior of the alcoholic is not the only behavior with high-risk potential in relation to alcohol. The problems to the individual and to society of an illness called alcoholism should not be minimized, but it should be recognized that alcoholism is one extreme in a range of behavior problems that may result from the excessive use of alcohol.

Any problem, whether psychological, social, or medical, in which alcohol is one of the factors is an alcohol-related problem. This does not imply that alcohol is the only factor involved in alcohol problems but it is a helpful idea to use in identifying people who have problems and who also use alcohol. Examples of alcohol-related problems would include students who drink and who are in trouble academically or administratively; students who are involved in school brawls after beer parties; youths who create public disturbances or are not up to going to work after drinking; those who are involved in crimes or in

automobile or other accidents during or shortly after drinking.

These types of behavior are not too uncommon. They may represent single episodes of no lasting significance or they may be signs of developing illnesses related to alcohol. In dealing with young people on inappropriate uses of alcohol, the primary emphasis, is on prevention. The focus must be on encouraging the development of appropriate behavior in relation to alcohol (either abstinence or responsible drinking) and to discourage the development of inappropriate behavior. An understanding of what we mean by "excessive use," and "illness," will help to achieve this goal. The concept of prevention should be introduced after an understanding of the physiological, psychological, and sociological factors is achieved.

RANGE OF EXCESSIVE USE AND ALCOHOL PROBLEMS

There is a wide range of drinking patterns, from a single toast on a special occasion to drinking too much, too often, on too many occasions. Even the same person may drink very differently on different occasions or under different circumstances. Anyone who uses alcohol in whatever amount that can result in recognizable discomfort or inability to function has an alcohol problem.

"Excessive" is a relative term for which there is no exact definition. In areas or cultures where alcohol is prohibited, any use of alcohol is excessive use. To a total abstainer, even one drop of alcohol is excessive. A single drink may cause one person to feel "giddy;" two or more drinks may have lesser effects on another person. There may be some value in drinking moderately to relieve tension, but the use of alcohol, even in moderation, as an excuse for solving life's problems or as a "bridge over troubled waters" is a type of behavior that may lead to problems.

Drinking with High-Risk Potential

In the 1970's young people seem to be drinking for a number of reasons that did not exist in the past. Most of these create high-risk potential. For example, having become more sophisticated in their knowledge of a greater variety of mood-modifying substances, they are concluding that alcohol enables them to achieve a safer "high" than that offered by the available alternatives. Some youths also believe that drinking is a means of making it easier for them to deal with parents. So they take a drink or two and find that parents are more relieved when they come home drunk than if their parents suspect they had been taking other drugs.

Reasons such as these may appear, for them, to be "good" reasons for drinking, but they cannot be considered to be indicative of behavior with low-risk potential.

The excessive use of alcohol has existed for thousands of years in almost every culture. Until recently the abuser of alcohol was thought of as sinful or evil, or as a morally weak or degenerate person, who could, if he wished, "cure" himself by his own efforts. The terms "alcoholism" and "alcoholic" often still connote these concepts, although they are no longer acceptable to those who are familiar with the nature of the problems involved. In referring to the wide range of behavior patterns associated with alcohol-related problems, it would be preferable to use such expressions as "problem drinking," "problem drinker," "alcohol-dependent behavior," and "alcohol-related problems." However, the terms "alcoholism" and "alcoholic" are so widely used that they cannot be ignored. Their meaning, in terms of our present understanding, will become clearer to students if they understand the concept of disease.

DISEASE

Disease refers to an unhealthy condition of mind, body, or both. The American Medical Association, in a policy statement adopted in December 1971, noted:

> The AMA identifies alcoholism as a complex disease with biological, psychological, and sociological components and recognizes medicine's responsibility in behalf of affected persons.
> The association recognizes that there are multiple forms of alcoholism, and that each patient should be evaluated and treated in an individualized and comprehensive manner.

From previous educational experiences, many students have learned to associate "disease" primarily with illnesses involving specific, identifiable, infectious causative organisms like bacteria or viruses—in diseases such as polio, smallpox, syphilis. Because there are definite treatments available to the medical profession, either by killing the organism (as in the case of syphilis) or preventing it from causing disease (as by vaccination against smallpox or polio) students often get the erroneous impression that there is a "magic bullet" for every disease. If alcoholism is a disease, why not try to develop an antibiotic or a vaccine, students may ask.

To answer intelligently, the teacher should explain our current understanding about the nature of disease. Any disease involves three factors. There is a person (host), a causative agent, and an environment which contributes to the host's ability to resist the effects of the causative agent.

The relationship among these three factors is complex, even in well-understood specific diseases such as polio. The mere presence of the polio virus does not mean that the disease will occur, even without the use of vaccines. Many people have recovered during its early stages without being aware they had the disease. The resistance of one person may be greater than that of another and the effects of the environment upon the causative agent or upon the individual, as expressed in terms of

an environment which contribute to physical health, may be important.

The disease concept of alcoholism is sometimes criticized because it is thought to imply a simple relationship between the host and the agent, without paying sufficient attention to psychological and social factors. This criticism is based on a misunderstanding of the disease model of alcoholism. The disease concept assumes that the expression of the disorder depends on an interaction of the individual, the agent of the disease (with alcohol as one of the contributing agents) and the environment in which the disease process develops. It is well known that disease processes can rarely be explained on the basis of any specific factors within these categories, but rather on the interrelationships. As was mentioned in the example of polio, even infectious disease is often more closely related to host-resistance factors and environment variables than to the presence or even virulence of any given infectious agent.

In the case of the group of diseases called "alcoholism" the hosts are the individuals and groups who use alcohol. The "causative" agent or agents have not been definitely established, although the alcohol content of a wide variety of available beverages is one of the contributing factors. There is also the environment, which contains factors that may invite or discourage the use of these beverages. The culture in which a person is brought up influence his attitudes toward alcohol. These attitudes, in combination with all other factors which affect his life, will shape his ability to succumb to the use of alcohol in excessive quantities, to become a sick individual, or to use alcohol as one part of a healthy life.

The concept of alcoholism as a disease is a comparatively recent one. Although the concept can be traced to the early nineteenth century, it was not developed and widely understood and accepted until the middle of this century. Teachers who would like to study the concept in more detail are referred to Jellinek, E. M., *The Disease Concept of Alcoholism*, Highland Park, New Jersey: Millhouse, 1960.

When referring in the classroom to alcohol disorders, it might

be preferable to use terms such as illness, sickness, or disorder, rather than disease because, as mentioned, disease in the minds of many students implies, in these days of medical "magic cures," a simple cure. Even in the medical world, the term "illness" is often used in referring to complex human disorders that are difficult to understand, diagnose, and treat. Thus one broad range of deviations from normal behavior is often referred to as "mental illness" rather than as "mental disease." (This example should not be used by the teacher to create the impression that alcoholism is primarily a mental disease. In our present state of knowledge, we just do not know.)

ALCOHOL-DEPENDENT BEHAVIOR

The essential difference between alcohol dependency and non-dependency is that in alcohol dependency there is a "craving" or uncontrollable desire for alcohol that goes beyond a "take-it-or-leave-it" voluntary choice. Most people who drink can stop drinking when they choose to do so. It is true that in American society there are often pressures which make abstinence difficult. Alcohol is easily available and freely offered in business and social environments. Nevertheless, most people can choose not to drink or to drink moderately of their own free will.

Anyone who depends on alcohol beyond its adjunct as a minor part of living is "alcohol dependent" and has an alcohol problem. "Spree" drinkers, who have alternate periods of sobriety with periods of drunkenness lasting for days and weeks, are alcohol-dependent. Steady drinkers who consume too much alcohol every day, but who continue to hold on to their jobs for long periods of time, are also alcohol-dependent. The line between such types of alcohol dependency and what is often called alcoholism is very difficult to define. Thus there is no such thing as one type of alcohol-dependent behavior. There are many kinds of alcohol-dependent patterns of behavior and many different kinds of alcohol-dependent behavior.

The term alcoholism is used to denote compulsive use or abuse of alcohol serious enough to interfere with one or more of the key areas in a person's life—his health, family relationships, ability to earn a living. This interference is associated with loss of control of the amount of alcohol the person uses and time and occasion of his drinking episodes. However, even specialists in the field have different ideas as to what they mean by alcoholism. Alcoholism, as an illness or as a group of illnesses, is a condition the proper diagnosis of which is the responsibility of physicians and other competent professionals. The indiscriminate use of the word by a layman implies a diagnosis and a judgment which should only be made by a professional person.

Thus we cannot recommend that alcohol education in the elementary and high schools should overly concern itself with the impairment of various organs that are associated with heavy drinking over long periods of time, or with the names of specific diseases, as described in so many references on alcohol education. It is sufficient to note that heavy drinking over long periods of time has been associated with serious physical, psychological, and social problems and that irresponsible patterns of drinking, for those who choose to drink, should be avoided. If students express interest in specific alcohol problems, suggest them as topics for student research.

Alcohol education should include, however, information about where people can get help and it should stress the importance of seeking help as soon as possible, if an alcohol problem is suspected.

REASONS FOR ALCOHOL DEPENDENCY

Alcohol-dependent illnesses are believed to be more complex than physiological illnesses. Like the group of illnesses collectively known as "heart disease," alcohol-dependent illnesses involve psychological and sociological factors, as well as physiological ones. That is, the emotional problems of the individual,

caused or aggravated by the social environment, are important contributing factors to the illnesses. A great deal of research is being devoted to understanding the physiological, psychological, and sociological factors involved. We shall indicate the directions this research is taking. From the point of view of alcohol-dependent behavior, we must conclude that the physiological, psychological, and sociological factors are inextricably entangled and cannot be separated from each other, at least not in the light of our current knowledge and understanding.

Alcohol differs from most other mood-modifying substances that produce dependency, in that large quantities over a long period of time (several years at least, in most cases) are necessary for dependency to develop. It has not been definitely established whether anyone who drinks large quantities of alcohol over long periods of time will become an alcoholic. It has been established that less than 10 percent of those who drink develop psychological and physiological dependence.

Obviously, with so many complicated factors involved, no definitions are entirely adequate. However, one set of definitions may be helpful in classroom discussions. Our current thinking about alcohol-dependent behavior revolves around the concept that such types of behavior are the result of problems of people and not solely inherent in the chemical or drug, ethyl alcohol, upon which problem drinkers are dependent. Alcohol, like other mood-modifying substances, varies in its effects on different people, depending on a large number of factors, such as differences in their biochemical make-up, personality, and goals and expectations in relation to alcohol.

As an important human problem, problem drinking has been the subject of a number of studies, including the work of the Cooperative Commission of the Study of Alcoholism. (Plaut, Thomas F. A., *Alcohol Problems;* A Report to the Nation by the Cooperative Commission on the Study of Alcoholism. New York: Oxford University Press, 1967)

The Commission report defined problem drinking as the repetitive use of beverage alcohol causing physical, psychological, or social harm to the drinker or to others.

Such a definition stresses the inability to cope or function normally, rather than any particular or specific type of drinking behavior. The actual amount, frequency, or pattern of alcohol use is not considered a primary criterion. Thus problem drinking is rather broadly defined to cover all persons who drink repetitively and are harmed by their drinking.

Alcoholism, as defined by the Commission, is a condition in which a person has lost control over his drinking to such an extent that he is consistently unable to refrain from drinking, or to stop drinking before becoming intoxicated. Thus, an alcoholic is a problem drinker, who in addition to suffering from problems because of his drinking, also has lost control over his drinking and is unable to refrain from drinking consistently or to stop drinking before he becomes drunk.

Such a distinction, although not absolute, enables us to think about problem drinkers as including a large number of people who are in need of help, but have not reached the stage where they have lost control. It also helps us to recognize the fact that no two problem drinkers are alike in biochemical reactions or behavior.

PSYCHOLOGICAL DEPENDENCE

Psychological dependence is the compulsive need for alcohol to relieve emotional discomfort. It is inferred to exist when the use of alcohol takes priority over other coping mechanisms and assumes a dominant role in the daily behavior of a person.

Two major reasons have been suggested for psychological dependence. The first is a need to escape from tension and pressures, from the problems of the real world. The alcohol-dependent person wants to "drown out" his troubles and does it literally with alcohol.

Beyond the personal reasons, there are social reasons for psychological alcohol dependency. The alcohol-dependent person often finds the social atmosphere of the bar pleasant. He

gets a sense of euphoria from both the alcohol and from "belonging." He wouldn't be part of this sub-culture if he didn't drink and keep up with the others, and within certain subcultures it is socially acceptable to drink. It is not necessary to drink as part of a group. The lonely, bored housewife may begin to drink in a pattern that leads to psychological dependence. The accessibility of alcohol, unfortunately, makes it easier for the dependency-prone person to fall into a serious drinking pattern.

Once involved, the person's life style then adapts to the subculture in which he lives. Alcohol-dependent persons, for example, are rarely arrested for true criminal activity, but for being a public nuisance.

Psychological dependency by itself is not indicative of a behavior problem. As a matter of fact, some degree of psychological dependence is a normal condition. People become psychologically dependent on certain types of music, books, television programs, foods, money, other persons. Even the use of alcohol to escape from the frustrations of life, although an ineffectual way to handle problems, is so frequent in our culture that it is considered generally acceptable behavior, if not overdone. It is only when a person becomes so dependent on alcohol that the dependence for a given individual results in physical, psychological, or social harm, that this dependency become symptomatic of a behavior problem—a problem associated with a compulsion to drink, and with inability to control the use of alcohol, in spite of the known serious consequences.

PHYSIOLOGICAL DEPENDENCE

In some long-term drinkers, in addition to psychological dependence, physical or physiological dependence occurs after the development of tolerance. Tolerance for alcohol refers to the

fact that progressively larger quantities are required to produce changes in feelings or behavior which previously have been obtained with smaller quantities. Some regular heavy drinkers can tolerate two or three times as much alcohol as an inexperienced drinker with the same effects. Other heavy drinkers never become physically dependent.

Physical dependence, in those who develop it, generally does not occur until after three to fifteen years or more of heavy alcohol consumption although some individuals, including youths, have developed dependency after a year or two of heavy drinking. A person physically dependent on alcohol experiences withdrawal symptoms when he stops drinking or decreases his alcohol intake. He becomes nauseated, anxious, agitated, mentally confused, sweats and may suffer from cramps, vomiting, and hallucinations. It is not necessary for an alcoholic to stop drinking completely before he experiences withdrawal symptoms, since a relatively small decrease from high alcohol levels may bring on this disorder. Withdrawal symptoms usually occur between twelve and seventy-two hours following cessation of drinking, although the time and severity are quite variable.

The physiological symptoms are alleviated by continuous use of alcohol and the vicious cycle continues unless the alcoholic is professionally treated. Because there are many kinds of alcoholism and many different types of alcoholics, treatment varies, depending on professional judgment.

Much research is being done to find a biochemical reason—an abnormality in the brain, liver, or other organs—which will determine why one person will become alcohol dependent while another will not. To date there is no conclusive evidence that any organ of the body is permanently damaged by moderate quantities of alcohol. Prolonged alcohol abuse has been shown to have toxic effects on a number of organs as well as secondary effects on metabolic processes. The liver is the major alcohol metabolizing organ in the body and liver damage is both the earliest and most profound consequence of excessive alcohol use. However, although excessive alcohol use almost invariably leads

to a condition called "fatty liver," not all alcoholics develop cirrhosis of the liver.

As for inherited factors, there is no conclusive evidence that the alcohol-related illnesses are genetic in origin. Although a considerable percentage of alcohol-dependent people have parents with similar afflictions, it is possible that the psychological and social environments of the home are involved, along with some as yet obscure hereditary factors. Women are just as susceptible as men, but because many women drink mainly at home, they are not as easily identified as men, who more commonly drink in public places.

Although the distinction has been made between psychological and physiological dependence, recent research indicates that the two may be interrelated.

Prevention of Alcohol Dependency

PRIMARY PREVENTION

IF alcohol dependency is an illness or a group of illnesses, there should be some understanding of how the illnesses can be prevented. Comparisons with some other illnesses may help. The best way of preventing an illness is to deny it a foothold in the first place. Smallpox, for example, has been so successfully prevented from occurring by the use of vaccines that we are beginning to wonder whether vaccination should be routinely continued. Malaria has been controlled by the elimination of the mosquito which carries the causative organism. This is the ideal kind of prevention and is referred to as primary prevention. In the case of alcohol dependency, we have no vaccine nor any possibility at present of developing one. Nor do we see the possibility of identifying a single cause. Instead, in dealing with the series of complex physiological, psychological, and sociological relationships involved, ideal primary prevention would consist of changing individual behavior and conditions of society so that the illness would not develop in the first place. Essentially, this is one of the objectives of alcohol education because primary prevention requires the groundwork to be laid far in advance. The teacher can help students to make responsible choices for themselves, and through these individual choices, help to affect

societal behavior in succeeding generations. Realistically this is a long process and will require several generations for a lasting solution even if society provides maximum support for a program of primary prevention.

SECONDARY PREVENTION

In the meanwhile, alcohol dependency does exist. Secondary prevention seeks to modify the behavior of drinkers whose alcohol-related problems are not yet deep-seated. As an illness, the principles of treatment follow the same general patterns as used by professionals in treating other illness. Concerned professionals emphasize the detection of the illness in its earliest stages, whether or not the person is aware that he is suffering from the illness. This is particularly true of alcohol dependency because one of the first effects of problem drinking is the inability to make good judgments. The alcohol-dependent person is often the last individual to realize that he is drinking excessively. Early detection and treatment is a very important factor in preventing the illness from becoming worse and taking steps to eliminate it.

TERTIARY PREVENTION

In spite of our recognition of the importance of secondary prevention, the concept of alcohol dependency as an illness is so new that the symptoms often go unrecognized for long periods of time. Thus an individual may become seriously ill, that is, he may have lost control over his drinking to such an extent that his health or social functioning has been seriously impaired, before professional help becomes available. At this stage the

principles of tertiary prevention are used. These consist of recognizing the illness as a truly serious one and using all the professional methods available to prevent it from becoming still worse, and as far as possible, to make it regress, or to eliminate it entirely. The professional is presently limited because he has no control over the environment and the social conditions that contributed to the illness. Therefore, the professional interested in the illness must not only concern himself with treating the anguish and pain of the alcohol-dependent individual, but must contribute, as best he can, to the elimination of alcohol dependency as a public health problem.

DIFFICULTIES OF PREVENTION PROGRAMS

Treatment and recovery from alcoholic illnesses are often reported in spectacular, exciting, and dramatic ways. Many health programs get support because they promise quick, tangible results. Primary prevention programs, on the other hand, must be developed over long periods of time. In addition, the use of alcoholic beverages is so much a part of American culture that the general public has not yet become fully aware of problem drinking as a public health issue.

There is therefore the danger that in the immediate future tertiary and secondary prevention may be emphasized. As a long-term investment, however, primary prevention programs, with their educational and public information aspects, will prove to be more effective in developing more responsible behavior patterns toward alcohol.

Treatment for alcohol-dependent people today is based on the belief that such persons have developed one or more of many different types of problems associated with alcohol and that these illnesses can be treated.

Many avenues of treatment are being used today and persons

who seek help for alcohol problems have a reasonably good chance that they will be helped. The many methods of treatment include physiological, psychological, and social approaches.

There is no evidence to date that any one method is more spectacularly successful than any other. Different people respond differently to different treatment methods.

The goal of many forms of treatment is the development of a choice of complete abstinence; however, the attainment of this goal has admittedly been difficult. Recently the emphasis has been in terms of the ability of a person to control his drinking most of the time. As with many other illnesses, relapses are to be expected and accepted, as part of the healing process.

Preventing inappropriate behavior involving alcohol, or minimizing the possibility of such occurrence, is an educational responsibility. The identification and treatment of problems associated with alcohol, however, is the responsibility of professional workers, such as physicians and other qualified individuals and organizations. It is beyond the responsibility and professional competence of classroom teachers to attempt to diagnose or suggest treatment for students with alcohol problems. How much initiative a teacher should assume in approaching a student suspected of having problems associated with alcohol will depend on how qualified the teacher feels himself to be. Beyond what the teacher feels he can personally do, especially if a student seeks teacher advice, the teacher has the responsibility of referring the student to a trained professional in the school or community.

Treatment facilities, with exceptions, have not had much experience with young people of school age in relation to alcohol problems, nor do adolescents often seek help. Although there are cases of very young alcoholics (a few verified cases of eight- nine- and ten-year old alcoholics), physiological dependence and withdrawal phenomena (as opposed to psychological dependence) are uncommon among students of school age. Youths who seek or are requested to seek help are those who have multiple health problems including alcohol abuse, particularly in the use of alcohol with other drugs.

EARLY WARNING SIGNALS

With alcohol problems, as with many other illnesses, people are often unable or reluctant to practice preventive medicine. They wait until the illness reaches an advanced stage, when attempting a cure or a regression of the illness becomes more difficult for both the sick person and for the professionals who are trying to help him. There are many reasons for the difficulty of recognizing the very early warning signals. Some of these difficulties are applicable to alcohol only; others apply to many other illnesses, as well.

1. *Vagueness of early signs.* The early signs of impending alcohol problems are vague, causing little or no discomfort to the individual, no interference with normal activities, no deterioration of interpersonal relations. The drinker may feel that he can control his drinking and that nature will heal, as it does many other illnesses. Even beyond the very early stages, most alcoholics still work, carry on productive lives. Skid-row alcoholics, who epitomize all the worst symptoms and behavior pattern of the illness, are only a small minority of the people who have alcohol problems.

2. *Impairment of judgment.* Alcohol is a mood-modifying drug and one of its effects is the modifying of judgment. A drinker will usually be the last person to recognize that his manner of drinking is changing.

3. *Misleading information.* Much of the literature available to teachers and students gives information about the effects of alcohol abuse upon the individual's physical health, psychological and emotional states, interpersonal relationships and economic wellbeing. These effects occur during the advanced stages of the illness and are not very real to youths. They are the effects of long years of abuse and when they manifest themselves, the illness has long been in progress.

The early warning signals which follow are not intended to be used as a do-it-yourself diagnosis of possible alcohol problems. They can be used in alcohol education to point out the

possibility that their occurrence may signal the need for decision making that will reduce the risk that alcohol problems might occur. The teacher has the responsibility of making sure that students understand what "risk" means.

Anyone who drinks alcohol, no matter who he is, runs some risk that the use of alcohol might becoming a contributing factor to a future problem. No one knows whether he will be the one to become a problem drinker. Thus it is wise to recognize that some risk is always present. The degree of risk is increased if the drinker can answer "yes"to the following feelings and behavior patterns about alcohol:

1. Do you have a frequent, say daily, *desire*, to have a drink (as opposed to a "take-it-or-leave-it" attitude)?
2. Do you need to have a drink at certain times of the day?
3. During the day, do you look forward to a drink in the evening?
4. Do you look forward to using alcohol to help you sleep?
5. Do you drink to "feel good" (rather than consider drinking as a social "lubricant")?
6. Do you have a desire to get "high"—and to maintain that high by more drinking?
7. When drinks are not served at a private party or in a public place, such as a restaurant, do you experience a feeling of disappointment?
8. When you experience physical discomfort or feel tense, do you use alcohol to try to obtain relief?
9. Do you always make sure you have alcoholic beverages available because you might happen to need a drink?
10. Has anyone who is really interested in you criticized your drinking?

The existence of some, or all, of these early warning signals does not mean that the person has the makings of a problem drinker, but a person with a sense of self-responsibility should take these signals seriously. At this stage he often can do it through his own efforts, or is responsible enough for his own behavior to seek guidance, if self-discipline is insufficient.

In the real world, some people will choose to disregard these warnings, just as they disregard warnings of other impending illnesses. Other people, however, will take their responsibilities

to themselves, and to others, seriously, and will make every effort to prevent the development of alcohol problems. The choice is up to each individual.

THE HANGOVER

Although there are many variables, if a person drinks too much too quickly—at a rate faster than his body can handle the alcohol—he will get drunk and will suffer from "morning after" misery characterized by fatigue, nausea, upset stomach, anxiety, and headache. With more drinking he may suffer more intense physical and emotional distress. These conditions are known as a "hangover." It should be emphasized that anyone who overindulges will probably suffer from this condition. The symptoms will disappear in time and although they are annoying while present, no permanent damage will occur from an occasional hangover.

The hangover itself is not necessarily indicative of alcohol dependency. It affects the moderate drinker who occasionally takes too much, especially if tired or under stress, as well as the excessive drinker after a prolonged drinking bout. The symptoms are usually most severe many hours after the peak of the drinking episode, when little or no alcohol can be detected in the body.

The exact mechanism is unknown at present. Although there is a popular belief that mixing different types of drinks is responsible, the hangover can be caused by any alcoholic beverage alone, or even by pure alcohol. There is inadequate evidence to support beliefs that it is caused by vitamin deficiencies, dehydration, or congeners such as fusel oil or other nonalcoholic components of alcoholic beverages.

Throughout the ages all kinds of "cures" for the hangover have been suggested. Nothing but time really works. Coffee, fresh air, breathing pure oxygen, exercise, a hot bath, going to sleep,

eating, more drinking—none of these things will affect the rate at which the body disposes of alcohol. There is little scientific support for the efficacy of the usual popular remedies.

The only preventive medicine for a hangover is before it happens—to never drink more than the body can handle. Hangovers can be prevented by drinking slowly, with food in the stomach, under relaxed social circumstances, and with sufficient self-discipline to avoid intoxication. The only effective cure, once a hangover occurs, is time.

Black coffee, for example, may give a temporary "lift" because the caffeine has a temporary stimulating effect and may produce shortlived illusions of mental alertness. It does nothing to speed up the oxidation of alcohol. However, during the time spent in drinking the coffee, the body continues to oxidize alcohol, so the time spent in drinking coffee may be time well spent.

(Although the rate of alcohol metabolism can be increased in the laboratory by the administration of a simple sugar, fructose, the technique has found little successful practical application since its discovery thirty-five years ago, because the possible side effects have not been fully determined.)

Risks in Driving

WE do not know what actually happens in a person's nervous system to make him "feel" a drink, but a great deal of scientific work has shown that the changes in judgment, muscle control, and behavior are related to the concentration of alcohol in the blood. The amount of alcohol in the blood can be determined by testing a person's blood, urine or saliva, but the breath test is the simplest and quickest method and the one most frequently used to determine the blood alcohol concentration (BAC), which may also be referred to as blood alcohol level (BAL).

Many publications contain tables on the effects experienced at different blood alcohol concentrations. Most students do not have sufficient scientific background to understand them. The teacher must exercise extreme caution in using such material in the classroom because of the dangers of misinterpretation. Many of the tables differ from each other because they are based on different sets of data. They summarize the results of statistical compilations and do not necessarily apply to any one individual. Most of the data to date were obtained from studies on adults and may not be applicable to the set and setting factors involving youths of school age. The table which follows is an example, in simplified form, of typical effects experienced at different BAC levels.

NO. OF DRINKS IN RELATIVELY SHORT PERIOD OF TIME	PHYSICAL AND PSYCHOLOGICAL EFFECTS	BLOOD ALCOHOL CONCENTRATION (PERCENT)
1–2	Mild relaxation—slight change in existing mood; slight feeling of muscle relaxation	.02–.05
3–4	Moderate impairment—of critical judgment; reaction time; simple muscular coordination	.05–.10
5–6	Major impairment—of complex physical and mental skills; some respiratory depression may begin at .15	.10–.15
7–8	Obvious intoxication—loss of motor control; mental confusion; significant respiratory depression	.15–.20
9–10	Severe intoxication—minimum conscious control of body and mind; increased respiratory depression	.20–.30
10+	Unconsciousness; deep coma; death may result from severe respiratory failure at .50 and higher (Although death from an acute episode of drinking is rare because the person becomes unconscious before respiratory failure occurs.)	.30–.60

Because of individual variations, reactions of any individual may differ from the averages.

A "drink" is generally defined as follows:

	AMOUNT OF BEVERAGE	PERCENTAGE OF ALCOHOL	AMOUNT OF ALCOHOL (OUNCES)
Beer	12 ounces	5%	0.60
Wine	5 ounces	12%	0.60
Whisky	1.5 ounces	40% (80 proof)	0.60

However, it is important to understand that not all drinks have equal amounts of alcohol. The alcoholic content of any one drink depends both upon the type and amount of liquor it contains. Some drinks may contain three ounces of liquor; others only one ounce of liquor. A drink is called strong or weak depending on the amount of alcohol in it.

Ideally, the best preventive medicine for alcohol-related driving problems would be for all drivers and pedestrians to have zero-percent BAC. In reality, we realize that preventing everyone who has any kind of BAC from driving or walking is unrealistic and cannot be enforced. It is therefore necessary, in practice, to set up some kind of standard or yardstick that would apply to everybody and be easy to determine and enforce. The National Highway Traffic Safety Administration of the U.S. Department of Transportation has recommended that, for driving, every state adopt a BAC of 0.10 percent as the level of intoxication—the concentration reached by having about five drinks in a comparatively short period of time. The blood of an individual with a 0.10 percent BAC contains one-tenth of one percent alcohol (one-tenth of a gram of alcohol by weight in 100 grams of blood, or about one drop of alcohol in every 1,000 drops of blood, or 15 drops of alcohol in a quart of blood). This amount might appear to represent a fairly diluted concentration, but it has been found to cause sufficient impairment of judgment and reaction time to cause more than a fivefold increased risk of being involved in a driving accident.

At present forty-five of the fifty states have adopted the 0.10 percent BAC level as the legal standard. Utah has set 0.08 percent BAC as the standard; four others use 0.15 percent. The trend today, which will probably be in effect eventually in all the states, is to use the recommendations of the American Medical Association, the National Highway Traffic Safety Administration, and the U.S. Public Health Service, as contained in the Uniform Vehicle Code (1962):

> If there was at that time 0.10 percent or more by weight of alcohol in the person's blood, it should be presumed that the person was under the influence of intoxicating liquor.

The Code also takes into consideration the fact that there is a range of values in relation to susceptibility to alcohol:

> If there was at that time in excess of 0.05 percent but less than 0.10 percent by weight of alcohol in the person's blood, such fact shall not give rise to any presumption that the person was or was not under the influence of intoxicating liquor, but such fact may be considered with other competent evidence in determining whether the person was under the influence of intoxicating liquor.

The Code also recognizes that people can legally drive after a drink or two:

> If there was at that time 0.05 percent or less by weight of alcohol in the person's blood, it shall be presumed that the person was not under the influence of intoxicating liquor.

From the point of view of alcohol education, some clarifications are necessary. The legal figures are based upon behavior of adult drivers. Many adolescents may not have achieved their full growth and because of smaller body size, may attain higher blood alcohol levels with smaller amounts of alcohol than the legal figures would lead them to believe. Adolescents should be especially careful about drinking before driving because less experienced drinkers may have greater effects with the same amount of alcohol than experienced ones. They are also relatively inexperienced drivers and therefore should limit any alcohol intake below the "one drink per hour before driving" goal. No driver can predict the extent to which his driving will be impaired by a given amount of alcohol.

It should also be made clear that the state laws in existence today are not uniform and that teachers and students should become familiar with the laws of the states in which they will be driving.

The legal definitions serve a very practical purpose, but because of differences in individuals reactions, the legal limits cannot accurately define the behavior of any individual in relation to the amount of alcohol he has consumed. However, we have

no practical means today of determining behavioral intoxication.

Considerable research has been done in the field of drinking and highway safety. It has been estimated that at 0.10 percent, the probability is at least six times as great that an accident will result than if the person were not drinking. A driver with a blood alcohol level of 0.15 percent has a chance of causing an accident twenty-five times greater than a nondrinking one. Pedestrians have a similar risk factor. It has been estimated that during certain hours of the night one in 50 drivers on the road has had sufficient alcohol in his blood to be considered legally drunk; during the day estimates range from one driver in 100 to one in 1,000 who is legally drunk. Thus anyone who walks on a sidewalk, rides a bicycle, or crosses a street is subject to some risk from a drunken driver.

Nor should the risk potential involving drunk pedestrians be ignored. Because of his impaired judgment, he may contribute to an accident, even when the driver is sober. His loss of motor control may also cause him to injure himself, or increase the risk of a car's injuring him.

Students often ask whether a breath (or urine or blood) sample can be taken without a person's consent and whether, if taken, it can be used as evidence, because of the constitutional privilege against self-incrimination contained in the Fifth Amendment. The issuance of a driver's license by the state is considered to be a "privilege" and not a "right" and the acceptance of a driver's license in practically every state carries with it the "implied consent" to permit the taking of a sample when circumstances arise, that is, upon a person's arrest on a "drunk driving" charge.

The U.S. Supreme Court has ruled that the use of such samples as evidence does not violate the "self-incrimination" clause of the Constitution. In practice, to protect the rights of anyone arrested for drunken driving, standard procedures have been developed, usually by a state board of health, under the state legislature.

To present an unbiased point of view, students should also

be reminded, on the positive side, that in our nation with so many cars, so many drivers, and such a great amount of driving going on, our statistical safety record is quite good.

The subject of driver education is a complex one and there is no national policy relating alcohol education to driver education. Each community and school should realistically face the problems involved, and determine what instruction will be most effective in this important area. One trend appears to be the emphasis on defensive driving—that caution should be exercised at all times when driving—because both other drivers and pedestrians possibly may be under the influence of alcohol.

Conclusion

WE have tried to incorporate in this resource book some suggestions for making learning about alcohol more realistic and effective. It may appear that we have ranged far and wide, touching on such subjects as history, chemistry, pharmacology, physiology, medicine, psychology, sociology, and law. We have tried to emphasize, however, that learning about alcohol is not involved primarily with subject areas, but with how human beings act and react in a complex environment. In the final analysis, the effectiveness of a program of alcohol education will be measured by what the students think of it and by the positive results it produces in the development of their knowledge, attitudes, and practices in relation to alcohol.

We do not expect that all teachers will find all the suggestions useful or will agree with all the points of view expressed. Each teacher will evolve those methods which for him will yield the best results. There are many techniques of teaching and an almost infinite variety of material that can be used. Each teacher will select the materials and methods with which he and his students will be most comfortable.

Much more important than technique, however, is the teacher's attitude. A teacher who is liked and respected is often mentioned by students as a potent factor in their attitudes toward the topic they are studying. Along with warmth and friendliness, flexibility in establishing relationships is essential. A rigid teacher, whose patterns of thought and feeling are set and who expects students to conform to these patterns, succeeds only in

making the student feel that his ideas are out of place and that his feelings are rejected unless he agrees with the teacher. Another expression of flexibility is tolerance. The tolerant teacher does not necessarily agree with the ideas and attitudes of a particular class member, but is willing to listen to them, consider them, and accept them as another person's point of view which he should be free to voice.

The teacher should be secure enough not to feel threatened by the feelings, the points of view, the concepts, and experiences of class members. The teacher's enthusiasm for, and sincere belief in, the value of the topic he is teaching is needed to help his students learn to live in accord with sound biological, psychological and social principles.

We have also tried to emphasize that in the real world all responsible choices involve an assessment of risks and that within the realities of everyday life there are often no ideal solutions to problems. All conflicts and contradictions cannot always be fully resolved. We will be more comfortable with the choices we have to make if they are based on accurate information, with a full understanding of the consequences of any course of action we choose to take.

APPENDIX

I. Manufacture and Uses of Alcohol

FERMENTATION

ETHYL ALCOHOL intended for drinking is always made from a natural source, such as grains, fruits, vegetables and other substances. Many of these contain sugar. Other grains have starch, such as barley, which is used to make beer. In these grains the starch is converted into sugar by enzymes in the barley before the fermentation can start.

In fermentation, what happens is that a weak sugar solution is changed by yeast into alcohol. If the sugar solution is too strong, the yeast cannot grow and use it. On the other hand, once a certain concentration of alcohol is reached, the yeast stops growing and producing enzymes. The fermentation ceases. The upper limits for this natural fermentation are determined by the different types of yeast used. In making beer, the brewer's yeast is inactivated at an alcoholic concentration of about 4 percent. Stronger members of the beer family are ale (a bit more than 4 percent) and "malt liquor" (about 6 percent). Wine yeasts stop growing at about 12–14 percent alcohol, which is about the upper limit for natural fermentation.

The process is called fermentation because while it is going on, in addition to alcohol, carbon dioxide gas is produced. The liquid seethes and moves as the bubbles of carbon dioxide escape

into the air, similar to what happens when the carbon dioxide escapes from a bottle of soda water.

The alcohol remains in the liquid. If grapes are used, the mixture of grape products and alcohol is called wine. If apples are used, either "hard cider" or apple wine is produced, depending on the fermentation process used. Fermented cereals produce beer; fermented honey is mead; fermented mare's milk is called koumiss.

The details of the processes used in producing these beverages are quite intricate and quality products are the result of patience and skills developed into an art and science over the centuries.

Thus these natural products differ from each other, depending on the source of sugar, but we know from our vantage point of modern science that they all contain the one simple compound—ethyl alcohol. Although alcoholic beverages have been produced and used for millenia, fermentation remained a mystery until comparatively recent times. The lack of knowledge resulted in many misconceptions and misunderstandings about alcoholic beverages until 1857, when Louis Pasteur discovered the nature of the fermentation process.

DISTILLATION

To go beyond the biological limitations of natural fermentation, to make beverages with higher concentrations of alcohol, such as found in whisky, vodka, gin, rum, and bourbon, a process of distillation is used. That is why these products are often called distilled "spirits" or distilled liquors, or just liquors. The word "spirits" goes back to the time before our understanding of the nature of the fermentation process. It refers to the then unknown essence which gives the alcoholic beverages their peculiar properties. It was believed that this essence contained a supernatural "spirit." The product of the natural fermentation is

nine-tenths water. By heating the mixture to boiling, in an apparatus called a still, the alcohol boils off first. The alcohol vapor is then caught in another container and cooled to convert it into a liquid again. Several distillations are required to concentrate the alcohol.

By successive distillations, very high concentrations of alcohol can be obtained, but such concentrations are too irritating to use. In practice, distilled spirits contain 40 or more percent alcohol (80 proof); some rums contain about 75 percent alcohol (150 proof).

The word "proof" goes back to the time, before scientific methods were developed, when the concentration of alcohol was tested by trying to ignite a mixture of alcohol and gunpowder. If the alcohol concentration was too low, the mixture would not light. If it was too high, it would give off a large flame. If it burned with an even, bright blue flame, it was "proof" that the alcohol content was about right.

One hundred percent alcohol is 200 proof, so to determine alcohol content by volume, divide the stated proof on the label by two. For example, 80 proof means 40 percent alcohol by volume—for distilled liquors. Beer alcohol is measured in terms of weight, beer having 3.2 percent alcohol by weight has 4.0 percent alcohol by volume. Labels on cans or bottles of beer do not state the alcoholic strength.

INDUSTRIAL ALCOHOL

Ethyl alcohol used for industrial purposes can also be produced by fermentation, but it is more economical to make it synthetically from petroleum. Similarly, methyl alcohol can be produced by the distillation of wood (hence the name wood alcohol), but is usually made from petroleum, as are the other types of alcohols used industrially.

TYPES OF ALCOHOLIC BEVERAGES

The major components of all beverages containing alcohol are ethyl alcohol and water; the active ingredient is essentially ethyl alcohol. By itself, the mixture of ethyl alcohol and water is not very palatable. The manufacture of alcoholic beverages has developed into a large industry, which blends the skills of an ancient art with the knowledge derived from modern science. The objective is to produce products of sufficient strength to give them a "kick" and with sufficient flavoring to make them pleasant to the taste. Different alcoholic products taste and smell differently, depending upon the natural flavors produced during the fermentation and through the addition of minor ingredients or the use of special processes to give the beverages flavor, aroma, and distinctive "character."

There are basically two groups of alcohol beverages—the nondistilled (wines and beers) and the distilled ones.

WINE

Most table wine is made from fresh, ripe grapes. The grapes, which contain 15 to 30 percent sugar, are crushed to release the juices. To make red wine, the entire crushed material is used; the red pigment from the grape skin gives the wine its reddish color. Only the juice, without the skin, is used in making white wine, or it may be made from whole white grapes. Rosé, or pink wine, is produced when the juice is fermented with red grape skins for only a few hours.

Grape skins have a grayish color on the outside; this coating contains sufficient yeast cells (which land on the skin from the air) to start the fermentation. However, many vintners (wine makers) use specially selected yeast strains. The fermentation process, which converts the sugar to alcohol, usually takes four to ten days. The resulting mixture is then stored for periods ranging from a few months to many years, to improve the flavor.

Wine produced only by natural fermentation has an alcoholic content of 12 to 14 percent by volume. To increase the percentage of alcohol, wine may be fortified by adding additional alcohol, producing such products as sherry and port, with alcoholic concentration of up to 22 percent by volume. "Dry" wine has only minute traces of sugar; sweet wines contain from 2 to 15 percent sugar.

Wines that contain carbon dioxide (the same gas as in club soda and other carbonated beverages) are called sparkling wines, of which champagne is a common type. Carbonated wines pass more rapidly from the stomach into the small intestine and produce mood-modifying effects and even intoxication more rapidly than noncarbonated ones.

Wines can also be distilled to produce brandy. Cognac is a brandy produced in one region of France.

In addition to grapes, wine beverages also are produced from a variety of fruits, such as apples, cherries, blackberries.

BEER

Beer is made from cereals, which contain starch. The cereals are ground up, mixed with water, boiled and cooled. This soup-like mixture is called mash. Yeast, however, can only ferment sugar, not starch. To change the starch to sugar, malt is added. Malt is made by moistening barley grains, causing them to start germinating (sprouting). During sprouting an enzyme is produced which can convert the starch into a simple sugar, maltose. The malt, after drying, is added to the mash. After standing for a few hours, at a regulated temperature, the mixture, called wort, is strained. Hops, the ripened and dried flower of the hop plant which give beer its characteristic bitter taste, are added. The mixture is boiled, filtered and cooled. Brewer's yeast is used to begin the fermentation. After a week or two, the liquid is further treated, carbonated, bottled or canned, and usually pasteurized to prevent spoilage.

Different manufacturing processes produce beers that differ from each other in character, but in general, American beers contain about 4 to 5 percent alcohol by volume.

Ale, porter and stout are similar to beer, with a higher alcoholic content and with characteristic colors and flavors that distinguish them from beer.

DISTILLED BEVERAGES

As mentioned, distillation is the process used to obtain beverages with alcohol concentrations greater than 12–14 percent. Whisky is a distillation of fermented cereal grains, then aged in wood. In the U.S. whiskies are classified as bourbon, rye, straight, and blended; and in 1972 the sale of a fifth classification, known as light whisky, became legal under Federal law. Bourbon must be produced from products containing at least 51 percent corn; rye, 51 percent rye; corn whisky must be produced from 80 percent corn.

Straight whisky is pure grain whisky of 100 proof, aged in new charred white oak barrels for not less than two years. A mixture of straight whiskies is called blended straight whisky. Bottled in bond is whisky which is bottled unblended at 100 proof under U.S. government supervision at the warehouse, after it has aged for at least four years. It is free from taxation until it is removed from the bonded warehouse. Blended whisky is a combination of not less than 20 percent aged whisky plus neutral spirits. Neutral spirits is a mixture of pure ethyl alcohol and 5 to 10 percent water. Light whisky is aged for at least four years in previously used barrels.

To be called Scotch whisky, the product must come from Scotland, where it is manufactured from malt (barley) only; the characteristic "smoky" flavor is the result of roasting the malt over a peat fire.

In the United States the two spellings, "whiskey" and "whisky,"

are used; Scotch whisky is always spelled "whisky." "Whisky" is derived from a Gaelic word meaning "water of life."

Other commonly used distilled products are gin, rum, and vodka. Brandy is distilled wine, usually aged in wood and containing 40 to 50 percent alcohol by volume.

Vodka is an 80–110 proof unaged beverage consisting only of neutral spirits and distilled water. The neutral spirits are distilled from any suitable source at an above 100 proof and are called "neutral" because they lack any distinctive taste, color, and odor. In making vodka, the neutral spirits are reduced to desired proof with distilled water and then filtered through charcoal. Although neutral spirits can be made from a variety of sources, they are customarily made from grain, not from potatoes, as is commonly believed.

Rum is made from fermented sugar cane juice or from its molasses. It usually contains 80–90 proof alcohol, but some brands contain up to 150-proof alcohol.

Gin is an 80–100 proof beverage made from neutral spirits, water and a large number of flavoring agents, known as botanicals, one of which is always obtained from the berries of the juniper plant. The word "gin" is thought to be a corruption of "juniper."

NONBEVERAGE USES OF ALCOHOL

Besides its use as a beverage, alcohol is an ingredient in a large variety of food, pharmaceutical, and industrial products.

Some of these contain considerable percentages of alcohol. Vanilla extract may contain 30 percent alcohol and some cough medicines 10 to 25 percent. Some products may contain alcohol other than ethyl alcohol and should never be taken internally, such as many hair tonics (as much as 70 percent), after shave lotions (35 percent), rubbing alcohol (70 percent alcohol).

Alcohols of various types, including ethyl alcohol, are also used for antifreeze in car radiators, as a solvent for shellac and varnish, in cleaning solutions and numerous other applications.

Alcohol intended to be used for any other purposes than as beverage alcohol is made totally unfit for human consumption by the use of smelly, bad tasting, and toxic substances called denaturants. The use of denaturants makes it possible for alcohol to be widely used without imposing upon it the high taxes to which beverage alcohol is subject.

Methyl alcohol, also known as wood alcohol, is a commonly used denaturant. Drinking it is extremely dangerous, even in small quantities. It is no more and no less intoxicating than the same quantity of ethyl alcohol, but unlike ethyl alcohol, which in moderate amounts is eliminated from the body within hours, methyl alcohol may remain in the body for up to a week. Its continued use may cause serious illness, blindness, and even death.

Denatured alcohol intended for external application, such as rubbing alcohol, is always labeled "FOR EXTERNAL USE ONLY." It is valuable for the purposes for which it is intended—to cool the skin by evaporation as an aid in reducing fever, to help prevent bedsores in bedridden patients, to disinfect the skin. It is not intended to be taken internally. (Rubbing alcohol is often made from another alcohol, isopropyl alcohol, which is also not to be taken internally.)

Because products containing denatured alcohol are so widely available in every home, students should understand that under no circumstances are they to attempt to drink substances containing denatured alcohol. Nor, if they are going to drink, should they experiment with any substance containing alcohol, other than products intended for beverage purposes. Most people prefer to purchase reputable brands obtained from reliable sources. However, the making of wine is an ancient practice that is still being carried on in many homes today.

Actually people who drink do not drink "pure" alcohol. The term "pure" alcohol refers to a solution of 95 percent absolute (water-free) alcohol and 5 percent water. One hundred percent

alcohol is difficult to manufacture and store because alcohol very rapidly absorbs water from the air. In popular usage, the word "alcohol," in relation to human consumption, is an abbreviated way of saying beverage alcohol or alcohol beverages.

Absolute ethyl alcohol is a colorless liquid with a mild odor that most people describe as rather pleasant. Absolute alcohol is extremely irritating to the mouth tissues, esophagus and the stomach and is thus not suitable for drinking purposes.

II. A Brief History of Health and Alcohol Education

ALTHOUGH alcohol education, we believe, is best integrated in all phases of the school program, appropriate behavior concerning alcohol is regarded as one aspect of learning about health in all its dimensions—physical, psychological, and social. A brief history of health and alcohol education may help to explain this relationship.

THE PREVENTIVE APPROACH

Health education in the nineteenth century evolved out of the increasing knowledge concerning the transmittal of disease and focused on personal and community hygiene programs for preventing disease. Understanding of disease required some knowledge of body functioning, or physiology, and within this context, by 1890, nearly all states had some laws requiring some teaching about alcohol in physiology and hygiene courses. Because of community pressures, such courses in practice were concerned with the physical and mental effects of alcoholism

with emphasis on abstinence as the best preventive medicine in relation to alcohol.

THE PHYSICAL EDUCATION APPROACH

The physiology and hygiene courses of the nineteenth century fell into disfavor in the early part of the twentieth century. Educators were not convinced that the schools had a primary responsibility for health and were divided as to the educational values of such courses.

World War I revealed deficiencies in the health of American youth and educators became interested in programs to improve health. The major emphasis was on physical health and the unfortunate impression was created that health education was synonymous with physical health. With the growing emphasis on mental as well as physical health, specialists in various aspects of health were needed, but schools were slow to bring such personnel into school programs.

THE MULTI-DIMENSIONAL APPROACH

World War II was one of the events stimulating new interest in both physical and mental health and the broadening of the meaning of the word. Since 1948 the generally accepted meaning of health has been based on the definition formulated by the World Health Organization:

> Health is a state of complete physical, mental, and social well-being and not merely the absence of disease and infirmity.

The acceptance of such an understanding of health by educators led to the conclusion that learning about a large number

of areas was necessary for students to develop patterns of health that are satisfying to both the individual and to the community. Such areas include, in addition to alcohol, accident prevention and first aid, boy-girl relationships, communicable diseases, community health programs, dental health, drugs, nutrition, smoking and others.

With so many different areas it is difficult to give each the attention it deserves within the confines of any curriculum. Some of these areas, like alcohol, are controversial ones and learning about them involves not only a knowledge of the facts, but a recognition that behavior is dependent on beliefs and attitudes, and is closely related to views and behavior regarding such things as pleasure, gratification of needs, social relationships, and religious beliefs.

THE CONCEPTUAL APPROACH

The recognition and definition of the complexity of the factors involved in alcohol education was an important step, but it becomes difficult, if not impossible, to select significant bits of information that would be most appropriate. One current attempt to solve the problem has been the development of broad ideas or concepts that would unify all the bits and pieces. This conceptual approach emphasizes that a person, as he grows and develops during his life, is in some ways completely different from anyone else, in other ways like every other person and in still other ways, like only some groups of people. As he grows he interacts with all aspects of his environment—physical, biological, psychological, social, cultural, and economic. At all times, as a human being, he possesses the ability to consciously make choices—the process of decision making. The teacher's role is to guide the decision-making process, but to be aware that the final decision is completely up the the individual.

ALCOHOL EDUCATION

State laws in the nineteenth century were directed primarily toward teaching about the evils of drinking, that is, about the evils of excessive drinking or alcoholism. Erroneous and misleading "facts" often crept in consciously or unconsciously in an attempt to support this point of view. Those who tried to make a realistic distinction between the abuse of alcohol and more moderate uses found it difficult to get the message into the schools. It was considered safer and less controversial to limit education to dangerous uses of alcohol, with which no one could disagree.

This unbalanced approach to alcohol education, often referred to as "alcoholism education" persisted until the 1950's and 1960's and is still the dominant philosophy of some alcohol education programs. Wherever used, this approach is an educational failure because it does not recognize and accept the realities about people and alcohol.

The two decades following World War II (the 1950's and 1960's) were characterized by an emphasis on science in solving all problems. The need for reliable and objective data regarding alcohol beverages and their effects was recognized, a great deal of research was done, and many of the misconceptions about alcohol were laid to rest. This wealth of scientific data contributed to more objective teaching about alcohol, but it also at times obscured the fact that scientific knowledge alone is insufficient in understanding a complex problem.

Beginning in the 1960's and continuing at present is the attempt to achieve a balance between the objective data of the research investigator and an appreciation of the motives and the circumstances which influence the behavior choices of people in relation to alcohol. This balanced approach recognizes that there are many acceptable choices in relation to alcohol—without minimizing the dangers involved in making irresponsible choices or drinking to such an extent that choices can no

longer be voluntarily made. This belief is the basis of the current approach toward alcohol education.

The development of a balanced approach to alcohol education does not mean that the road ahead is without its obstacles. There are a number of problems to be realistically faced in alcohol education. They all stem from the fact that there are widespread differences of opinion regarding practically every aspect of the subject. However, there is increasing consensus that the focus should be on growth and development, values, coping, decision making, education for living and so on, and not just on alcohol education.

Some differences of opinion are based on varying conclusions from scientific investigations, others have an ethical, emotional, or irrational basis. Whatever the reasons, the differences exist in reality. For example, the universal disapproval of excessive drinking has been interpreted in some groups to mean opposition to all drinking. Because most Americans today accept the use of alcoholic beverages, total sanctions are inappropriate and where applied, have failed to prevent irresponsible drinking behavior. In some communities, however, "dry" laws are still in effect. How can such laws be reconciled with actual behavior in relation to alcohol and with the importance of obeying the law? Are the important alcohol problems of the community primarily the problems of alcoholism or are they the problems of teenaged drinker-drivers? Should alcohol education encourage moderation in drinking or abstinence, or should it focus on prevention of possible drinking problems? Where segments of the community do not agree on what the answers should be, the efforts of the schools and the teacher will be less than effective, even if there are firm curriculum guidelines.

III. Teaching Media and Sources

THE increasing interest in alcohol education has led to the growth of an industry that is developing publications, films, and other materials designed to assist school programs. Letters, advertising materials, and sales presentations designed to sell these materials to the schools are increasing in number.

Freedom of communication in our country involves the right of any person and organization to produce the kinds of materials that they believe will further the objectives of alcohol education. Because of the diversity of opinion that exists, it is natural that these materials will vary widely in approach and effectiveness. It is the responsibility of the schools to make judgments on the suitability of any material in the classroom, based on the specific objectives of alcohol education in specific community, school, and classroom situations. While no universally accepted criteria for evaluating such materials have been developed, there are some general guidelines that may be of help:

1. Does the material present information that will help young people think through their own attitudes and behavior in relation to alcohol, or does it present preconceived opinions and then present facts and attitudes to try to get students to come to the same conclusion?
2. Does it directly or indirectly use negative scare tactics?
3. Does it, wherever possible, always concern itself with the

psychological and sociological aspects of alcohol choice, and not only with the purely physiological point of view?

4. Does the material give the impression that it knows all the answers?
5. Does it accurately present the socially acceptable uses of alcohol, as well as the problems caused by abuse?
6. What does it contribute to learning that the students and teacher cannot do as effectively? Is it a "crutch" for the less capable teacher?

While the final decision as to whether any specific material will help or hinder the achievement of the objectives of alcohol education is a school and teacher decision, schools may find it helpful to form committees representing different professional and lay groups in the community to present points of view that will be helpful to the schools in making the final evaluation.

Teaching Media and Sources

FOR TEACHERS

Barber, Bernard. *Drugs and Society*, New York: Russell Sage Foundation, 1967.

A perceptive exploration of man's uses and abuses, now and in the past, of all the varied substances that have been called "drugs."

Bacon, Margaret and Mary Brush Jones. *Teen-Age Drinking*, New York: Thomas Y. Crowell Co., 1968.

This book explores factors involved in drinking customs followed in other societies and among American adults; it cites reasons why teen-agers drink or abstain, based on surveys. Deals with stereotyped attitudes about teen-agers and other drinkers. Notes the social controls and legal restrictions on teen-agers. The book has an excellent chapter on pharmacology of alcohol. It is an excellent survey of attitudes among teen-agers on drinking. Sociocultural patterns, traditions, and parents are seen as the major influences on teen-age drinking.

Block, Marvin A. *Alcohol and Alcoholism*, Belmont, California: Wadsworth Publishing Company, Inc., 1970.

Byler, Ruth V. (ed.), *Teach Us What We Want To Know*, 1969. Mental Health Materials Center, Inc. 419 Park Avenue South, New York, New York 10016.

The report of a survey among more than 5,000 children of school age in Connecticut. The results reveal surprising kinds of health interest and concerns expressed by the children, as evidenced in discussion, observation, and student writings.

Cahalan, Don, Ira H. Cisin and Helen M. Crossley. *American Drinking Practices, A National Study of Drinking Behavior and Attitudes*, New Jersey: Rutgers Center of Alcohol Studies, 1969.

The most complete survey of drinking practices done to date in the United States. Identifies nature and major attitudes of different categories of abstainers and consumers. Uses demographic approach in measuring the use of alcohol among identifiable segments of the population. Users are classified in terms of how much, type of beverage consumed, and frequency of consumption. Presentation is strengthened by 111 tables of data.

Carroll, Charles R. *Alcohol: Use, Nonuse and Abuse*, Dubuque, Iowa: Wm. C. Brown Company Publishers, 1970.

Chafetz, Morris E. *Liquor: The Servant of Man*, Boston: Little, Brown and Co., 1965.

Focuses on the positive uses of alcohol and discusses issues such as teen-age drinking, alcohol and sex, drinking and driving, physical and behavioral effects and the role of alcohol in history.

Cross, Jay N. *Guide to the Community Control of Alcoholism*, New York: American Public Health Association, 1968.

Three-part book covers use of alcohol (history, effects, social functions and community problems), alcoholism (nature and extent of problem and current community problems), and program development (agency roles, approaches, and program elements).

Finn, Peter and Judith Platt. *Alcohol and Alcohol Safety*, Washington, D.C.: U.S. Department of Transportation, National Highway Traffic Safety Administration, 1972.

This publication consists of six volumes—two volumes each for elementary school, junior high school, and senior high school. One volume is a curriculum manual for that level while the second is a teacher's activities guide. In terms of sheer volume, this is the most ambitious attempt to date to develop curriculum materials on alcohol education on a national level. Teachers will have to decide how much of the material can be effectively used within the realities of the time allocated to alcohol education in the curriculum. Teacher judgment will also be required to determine whether to use some of the activities as student projects. For example, Activity 222 (Vol. II of Senior High Level), suggests that students interview skid-row alcoholics and states "students may need to offer derelicts 50¢ for answering these questions." It is questionable whether such an activity should be included in an alcohol education program.

The Humane Society of the United States, *Guiding Principles for Use of Animals in Elementary and Secondary Schools*, 1973. The Humane Society of the United States, 1604 K Street, Washington, D.C. 20006.

Israel, Yedy and Jorge Mardones (eds.), *Biological Basis of Alcoholism*, New York: John Wiley & Sons, Inc., 1971.

Twenty-nine researchers analyze the different approaches and recent findings of their work in an attempt to establish a scientific basis for the solution of alcohol problems.

Lucia, Salvatore P. (ed.), *Alcohol and Civilization*, New York: McGraw-Hill Book Co., 1963.

An excellent source of information from an interdisciplinary viewpoint. Contributors are eminent authorities in the pharmacological, physiological, sociopsychological, psychiatric and legal fields.

Maddox, George L. and Bevode C. McCall. *Drinking Among Teen-Agers: A Sociological Interpretation of Alcohol Use by High School Students,* New Jersey: Rutgers Center of Alcohol Studies, 1964.

Describes teen-age drinking behavior as determined from a major study conducted by the authors.

McCarthy, Raymond G. (ed.), *Alcohol Education for Classroom and Community: A Source Book for Educators,* New York: McGraw-Hill Book Co., 1964.

The most comprehensive volume dealing with alcohol written to date. It deals with philosophy of alcohol education, effects of the use of alcohol, statistics, social problems associated with abuse, the alcoholic beverage industry, and it has a whole section on alcoholism. The book includes contributions by the leading authorities in the fields cited.

McCarthy, Raymond G. (ed.), *Drinking and Intoxication: Selected Readings in Social Attitudes and Controls,* New Jersey: Rutgers Center of Alcohol Studies, 1959.

Collection of readings on alcohol practices and restraints over such practices in different historical and contemporary societies.

McCarthy, Raymond G. *Exploring Alcohol Questions,* New Jersey: Rutgers Center of Alcohol Studies, 1970 (Revised).

McCarthy, Raymond G. (Revised by John Pasciutti), *Facts About Alcohol,* Chicago: Science Research Associates, 1967.

National Institute on Alcohol Abuse and Alcoholism, *Alcohol and Health: First Special Report to the U.S. Congress,* Washington, D.C.: Superintendent of Documents, U.S. Government Printing Office, 1971.

Report focusing on alcohol abuse and alcoholism, with general overview of alcohol's history, use and physical effects.

Pittman, David J. and Charles R. Snyder (eds.), *Society, Culture and Drinking Patterns,* Carbondale, Illinois: Southern Illinois Press, 1962.

Selected readings on drinking patterns and restrictions on them in various societies.

Plaut, Thomas F. A. (prepared by), *Alcohol Problems: A Report To The Nation,* New York: Oxford University Press, 1967.

A report by the Cooperative Commission on the Study of Alcoholism, whose membership was composed of distinguished scientists. This report deals with the background of problems associated with alcohol abuse, and explores current prevention methods and treatment facilities. The conclusion is a recommendation for improvements in dealing with alcohol problems through a coordinated national approach.

Raths, Louis E., Merrill Harmin, Sidney B. Simon. *Values and Teaching*, Columbus, Ohio: Charles E. Merrill, 1966.

Roueché, Berton. *Alcohol, Its History, Folklore and Its Effect on the Human Body*, New York: Grove Press, 1962.

Originally published in hard cover form, now out of print, as *The Neutral Spirit, A Portrait of Alcohol*. An entertaining but well-researched and well-written account of the history of alcohol use from early civilizations to the present era. Brief review of the origins of different major types of alcoholic beverages. Background on the growth of distilling in America. Several chapters explode many prevalent myths about alcohol, its effects, normal drinking, and alcoholism.

Simon, Sidney B., Merrill Harmin, Howard Kirschenbaum. *Clarifying Values Through Subject Matter*, Minneapolis, Minnesota: Winston Press, 1973.

Simon, Sidney B., Leland W. Howe, Howard Kirschenbaum. *Values Clarification: A Handbook of Practical Strategies for Teachers and Students*, New York: Hart Publishing Company, Inc., 1972.

Todd, Frances. *Teaching About Alcohol*, New York: McGraw-Hill Book Co., 1964.

Both a source of what to teach, but more *how* to teach alcohol education. The factual information is drawn largely from McCarthy's book mentioned above. The philosophy, as well as some specific examples of teaching methods, are covered.

Journal of Alcohol Education, 3500 North Logan, Lansing, Michigan 48614.

A valuable periodical for teachers who would like to keep up-to-date.

FOR STUDENTS AND TEACHERS

Alcohol and Alcoholism: Problems, Programs and Progress. DHEW Publication No. (HSM) 72-9127, U.S. Department of Health, Education and Welfare, 1972 (Revised).

A monograph outlining the history of the use of alcohol in the United States, including the physiology. It discusses the nature and extent of alcoholism today, what is being done to alleviate the problem, as well as steps toward prevention and control. This booklet has an extensive bibliography and is suitable for use by students and teachers. It may be purchased through the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402 for $.50.

People Do Drink and Drive: A Guide to Personal Decisions. American Driver and Traffic Safety Education Association, a department of

the National Education Association, 1201 Sixteenth Street, N.W., Washington, D.C. 20036, 1973.

Designed for youth groups, particularly high school classes. Though prepared specifically for driver education classes, it can be used for social studies groups and other youth oriented programs. Situations are presented that involve difficult decisions. A teacher's guide sheet is available. Single copies are $1.20.

Thinking About Drinking. DHEW Publication No. (HSM) 72-9076, U.S. Department of Health, Education and Welfare, 1972 (Revised).

A stimulating booklet for teachers and students. The primary focus is on the decisions teenagers make with regard to alcohol use and nonuse. Although facts are presented, the booklet is behaviorally oriented. It has a quiz to test factual knowledge. Through the use of situation devices, it challenges conceptual understanding and attitudes about the use of alcohol. May be purchased from the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402 for $.20.

FILMS

(16mm color unless otherwise noted)

Alcohol, 1969
National Audiovisual Center
General Services Administration
Washington, D.C. 20409

Single concept film about uses of alcohol in American society. General audience—junior high and above, 5 minutes.

Alcohol—How Much is Too Much?, 1973
Aims Instructional Media Services, Inc.
P.O. Box 1010
Hollywood, California 90028

Objective basis for decision making. Suitable for grades 5-9 and adults, 11 minutes.

Alcoholism: A Model of Drug Dependency, 1972
CRM Educational Films
Del Mar, California 92014

Intoxication and alcoholism for senior high and college audiences, 19 minutes.

Alcoholism in the Family; The Summer We Moved to Elm Street, 1968
McGraw-Hill Films
1221 Avenue of the Americas
New York, New York 10020

Effects of alcoholism on family life. For adult discussion groups, high school and college students, 28 minutes.

The Curious Habits of Man, 1968
A-V Explorations, Inc.
505 Delaware Avenue
Buffalo, New York 14202
How alcohol affects behavior. Junior high, high school, and adult groups, 14 minutes.

The Drinking American, 1969
Field Services
Indiana University
Audio-Visual Center
Bloomington, Indiana 47401
A documentary suitable for high school, college, and adult groups, 60 minutes, black and white.

Drugs, Drinking and Driving, 1970
Aims Instructional Media Services, Inc.
For senior high and adult audiences, 18 minutes.

I Think, 1971
Wombat Productions, Inc.
87 Main Street
Hastings-on-Hudson, New York 10706
The pressures of society, for elementary students, 19 minutes.

Need for Decision, 1968
Peckham Productions, Inc.
9 East 48th Street
New York, New York 10017
Alcoholism in industry. Suitable for junior and senior high school students and adults, 10 minutes, black and white.

The Other Guy, Parts I & II, 1971
Contact local Blue Cross and Blue Shield for information.
The life of an actual alcoholic. For high school and college students, and community groups, 28 minutes each part.

Point Zero Eight, 1966
CTV Television Network Ltd.
42 Charles Street East
Toronto, Ontario M4Y1T4, Canada
Effects of alcohol on driving skill for senior high, college, and adult groups, 30 minutes, black and white.

Problem Drinking: A Call To Action, 1970
Association Instructional Materials
866 Third Avenue
New York, New York 10022

One community's attempt to cope with alcohol problems. For community groups, junior high and above, 25 minutes.

The Secret Love of Sandra Blain, 1971
Aims Instructional Media Services, Inc.
The female alcoholic, suitable for senior high school, college, suburban groups, 27½ minutes.

A Snort History, 1971
Denver Alcohol Safety Action Program
1845 Sherman Street
Denver, Colorado 80203
Drinking and driving for driver education classes and general audiences, 6½ minutes, 16mm or 35mm.

Thinking About Drinking, 1968
Perennial Education, Inc.
1825 Willow Road
Northfield, Illinois 60093
General information for upper elementary and junior high schools, 14½ minutes.

To Your Health, 1956
Center for Mass Communications,
Columbia University Press
562 West 113th Street
New York, New York 10025
General information for junior high school and above, 10 minutes. Spanish version available. A landmark in the development of effective visual materials. Although produced in 1956, it is still extremely useful today and should not be rejected because of the date of production.

US, 1971
Churchill Films
662 North Robertson Blvd.
Los Angeles, California 90069
Mood modification and the urban environment. Senior high and adult groups, 28 minutes.

Wets Vs Drys, 1965
Films, Inc.
1144 Wilmette Avenue
Wilmette, Illinois 60091
History of prohibition. Suitable for general audiences, high school and above, 25 minutes.

What Time Is It Now?, 1968
Gargano Associates, Inc.
15009 West Warren
Dearborn, Michigan 48126

Teenager's motivation for drinking, for teenage audiences, 16 minutes.

What's It Going to Get You, Peppy?, 1970
Youth Film Distribution Center
4 West 16th Street
New York, New York 10011
Youthful abuse of alcohol in ghetto/urban areas. Particularly suitable for youth, junior high and above, 9 minutes, black and white.

COLOR FILMSTRIPS

(35mm)

Alcohol: The Social Drug/The Social Problem, 1971
Guidance Associates
41 Washington Avenue
Pleasantville, New York 10570
Basic facts plus responsible drinking theme for junior high, senior high, college, and adults. Two parts, with 33⅓ rpm disc.

Alcohol and Children, 1973
Educational Activities, Inc.
Box 392
Freeport, New York 11520
Fundamental information suitable for grades 4-8. Four parts, with cassettes or discs.

Me, Myself and Drugs, 1971
Guidance Associates
Basic plus behavioral and societal influences. Upper elementary and junior high school. Three parts of 9, 6, and 7 minutes, 3 lp discs, discussion manual.

A New Look At The Old Sauce, 1966
The Texas Commission on Alcoholism
809 Sam Houston State Office Building
Austin, Texas 78701
Basic facts on alcohol, social drinking and alcoholism, suitable for upper elementary school through adult level. 17 minutes, color, 33⅓ rpm disc, script, leader's manual.

Reflection, 1971
Image Publishing Corp.
15 East 26th Street
New York, New York 10010

One of seven sound filmstrips in the series *Mental Health: Toward a Positive Image* which deals with various aspects of mental health. While the theme is alcohol, including intoxication and alcoholism, the focus is on self-worth and acceptance of others. 70 frames of excellence made especially for use with students in grades 4–6, with 33⅓ rpm disc. Running time varies in terms of discussion interludes.

Sedatives: The Drug Information Series, 1970
Guidance Associates
Information on barbiturates, tranquilizers, alcohol and marijuana. For teenage and adult audiences. With 33⅓ rpm disc, discussion guide.

Tobacco and Alcohol: The $50,000 Habit, 1967
Guidance Associates
For teen-agers and adults. Two 13 minute filmstrips, two 12-in. 33⅓ rpm discs, discussion guide.

COLOR TRANSPARENCIES

The following are selected from the Concept 9 series of color transparencies developed as part of the material of the School Health Education Study program. They are produced by and available from Visual Products Division, 3M Company, Box 3100, St. Paul, Minnesota 55101. Concept 9 deals with the concept that use of substances that modify mood and behavior arises from a variety of motivations. Teacher learning guides and extensive lists of teacher-student resources are available for each level.

Differences Between Alcoholic and Other Beverages (Level I, Grades K–3)
Family Variations Regarding Alcohol and Tobacco (Level I, Grades K–3)
Range of Mood and Behavior Modifiers (Level II, Grades 4–6)
Mood and Behavior Modifiers: Common and Special Circumstances (Level II, Grades 4–6)
Alcohol and Inhibitions (Level III, Grades 7–9)
Alcohol: Use and Misuse (Level IV, Grades 10–12)

Alcohol Education Transparencies, 1969
DCA Educational Products, Inc.
4865 Stenton Avenue
Philadelphia, Pennsylvania 19144

Learning About Alcohol

Twenty-four transparencies, eight on each of three levels—beginning programs, junior high, senior high.

GENERAL RESOURCES

(For use by teachers and students)

The following is a list of organizations which provide a wide variety of beverage alcohol information, most in pamphlet form, at little or no cost. Materials are available for both teachers and students. Most of the organizations publish catalogs of their materials.

A. A. World Service, Inc.
P. O. Box 459
Grand Central Station
New York, New York 10017

This organization is the general service division of Alcoholics Anonymous. It publishes numerous pamphlets on Alcoholics Anonymous and alcoholism, primarily for the use of people with alcohol problems. Single copies of its publications are sent free.

Al-Anon Family Group Headquarters, Inc.
P. O. Box 182
Madison Square Station
New York, New York 10010

This resource provides information and help for the immediate family, relatives, and friends of problem drinkers, whether or not the problem drinker himself seeks help or even recognizes the existence of an alcohol problem.

Alateen, the junior segment of Al-Anon, is designed for teen-age children of problem drinkers. There are groups throughout the country. Information can be obtained by both teachers and students from the New York headquarters, if not listed in the local telephone directory.

Alcohol and Drug Problems Association of North America
Education Department
1130 Seventeenth Street, N.W.
Washington, D.C. 20036

Formerly the North American Association of Alcoholism Programs. A list of local affiliates is available.

Allstate Insurance Company
Allstate Plaza
Northbrook, Illinois 60062

Several drinking-driving publications.

American Medical Association
535 Dearborn Street
Chicago, Illinois 60610
Information and lists of materials available.

Blue Cross
622 Third Avenue
New York, New York 10017
A catalog of films and publications is available.

Kemper Insurance Company
4750 Sheridan Road
Chicago, Illinois 60640
Several drinking-driving pamphlets.

Licensed Beverage Industries
A Division of Distilled Spirits Council of the United States, Inc.
485 Lexington Avenue
New York, New York 10021
Free articles on alcohol education, and many pamphlets on various alcohol topics (e.g., safety, cooking).

National Council on Alcoholism, Inc.
2 Park Avenue
New York, New York 10016
Various pamphlets and books on alcoholism. A list of local affiliates is available.

Metropolitan Life Insurance Company
1 Madison Avenue
New York, New York 10010
Thirty-page booklets on alcoholism, several on industrial progr ms.

National Institute on Alcohol Abuse and Alcoholism
5600 Fishers Lane
Rockville, Maryland 20852
This organization, in the Health Service and Mental Health Administration of the Department of Health, Education and Welfare, is concerned with all aspects of alcohol and alcohol problems. It publishes comprehensive reviews of multi-media materials.

Publications Division
Rutgers Center of Alcohol Studies
Rutgers—The State University
New Brunswick, New Jersey 08903
Popular, technical and nontechnical books, pamphlets and reprints on all aspects of beverage alcohol use and abuse.

Teachers should also contact their State Divisions of Alcoholism, State Departments of Education, State Departments of Mental Health and

State Safety Councils for information that would be pertinent to their own areas.

MISCELLANEOUS MEDIA

Alcohol Education: What We Should Know About Alcohol, 1957
Cleveland Health Museum
8911 Euclid Avenue
Cleveland, Ohio 44106

A series of 6 color slides (35mm) examining alcohol use in society and various alcohol and social problems. Selected pamphlets and extensive study guide included. Junior and senior high school.

Alcohol Education Information and Content Flip Chart, undated.
Winston Products for Education
P. O. Box 11219
San Diego, California 92112

Flip chart which presents basic information on alcohol use and abuse—61 pages, 16½ x 23½ inches, accompanied by instructor's guide. For junior and senior high audiences and adults.

Dial a Drink, 1970
Spenco Medical Corp.
P. O. Box 8113
Waco, Texas 76710

A cardboard wheel which correlates amount and type of beverage consumed with blood alcohol levels, effects, metabolism, driving safety level, accident risk, and legal driving status. For junior high, senior high, college and adult audiences.

The text of this book is set in
Linotype Janson. Composed and
printed by The Vail-Ballou Press,
Binghamton, New York.
Book and cover design by Vincent Torre.

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